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A.

Acre, English and U. States,...... 67
Addison Co. (Vt.) Ag. Society,.... 99
Agricultural Boiler,............... 188
— College, New-York, ... 69
— Education in N. Carolina,.. 207
— Experiment Farm at Moeckern,....... ...., 109
— Machinery,................. 20
— Papers, Influence of,....174, 194
— Professorship in Georgia,... 323
— Societies, Suggestions to ... 41
— — Town, Value of,....... 19
Agriculture, British, ...12, 75, 105
— Empiricism in, ... 194
— Government Aid to,........ 10
Albany Co. Ag. Society,.......53, 337
— — Farming in,.........21, 54
— Agricultural Works, ... 98
Alimentation, Laws of,........... 202
Alleghany Co. Ag. Society,....... 259
American Pomological Society,... 343
Ammonia, Influence of on Vegetation, ... 335
Analyses of Soilss, Practical Value of;...................233, 260
Analyses of Plants, Practical Value of, ... 369
Animal Comforts and Rural Conveniences,..................... 9
Animals, Awarding Premiums on, 218
— Breaking Young, ... 214
— Breeding in-and-in, Degeneracy from,.............. 282
— Boiling Feed for, ... 49
— Fattening with Cod LiverOil, 78
— Poisoned, Cure for,......... 189
— To Prevent Winter Kill in,. 37
— Wintering Domestic,....... 19
Announcement for 1855,.......... 329
Answers to Inquiries, ...162, 371
Aphis on Apple Trees, ... 286
Apples, Best for Market,.......... 154
— Byron Whiting, ... 193
— Ford, ... 340
— Fine Samples of,........... 99
— Tompkins Co. King, ... 186
— Winter,.................. ... 185
Apple Trees, Grub in,............ 256
— — Insect in,............... 188
— — Mismanagement with,.. 124
— — Soils for,............... 122
Apple Worm, ... 250
Ashes and Plaster for Potatoes,.... 145
— For the Plum, ... 144
— Value of, in Agriculture,.... 140
Artificial Fish Pond, ... 37
Astonishing Transmutation, ... 374

B.

Babies, Premiums on,............ 292
Barley Crop of New-York,....... 52
— Great Yield of, ... 69
Barns for Stock,................ 245
— For General Purposes, ... 218
— Mr. Calvert's, ... 281
— Plan of,............... ... 268
Bees, Chloroform for, ... 37
Blackberry, Lawton,...........91, 194
— Tall,...................... 116
Boilers for Farm Purposes, ... 188
Bone Dust, How Applied, ... 181
Bone Sickness in Cattle,......111, 159
Bones, as a Fertilizer, ... 52
— Dissolved by Ashes,.80, 137, 173
— Preparation of for Use,...52, 78, 217
Book Farming, Remarks on, ... 284
BOOKS—Chandler on Potato Rot, 355
Elliot's Fruit Book,.......... 156
Farm Implements,...226, 237, 379
Tobacco Culture,............ 195
Trans. Rhode Island Ag. Soc., 194
— Royal Hawaiian Ag. Society, ... 226
Brakes, To Destroy,............17, 210
Bread Stuffs, Prices of,........... 108
Breeding in-and-in, Degeneracy from, ... 282
Brockville Hort. Society,......... 220
Brookfield Town Ag. Society,.100, 220
Buckwheat, Culture of,.......113, 246
— Injurious to Corn,.......... 142
— Time for Cutting,.......... 245
— What Crop should Follow it, 193
Budding in Autumn,............. 88
— Roses, ... 252
Bucks Co. (Pa.) Fair,............ 379
BUILDINGS—Barn, Mr. Calvert's 281
Composition Roofs for,....... 47
Cottages for Farm Laborers, 50, 116, 323
Plans of,............245, 268, 248
Design for a Spacious Country House,..................... 24
Buildings—Designs for School Houses,................. 184
Farm House in Italian Style,. 122
Farm, Plan of,...........248, 280
Gravel Houses,............... 144
Green House, Cheap,........ 61
Poultry House, Cheap,....... 222
Plan of a Country House,.... 56
Piggery, Plan for,............ 152
Roofing for,.................. 53
Slate for Roofing,............ 342
Unburnt Brick,............... 160
Valuable Paint for,........... 148
Ventilation of, ... 299
Burlington Co. (N. J.) Ag. Soc... 220
Bushel, English and U. States,.... 67
Butter, Best Made,............... 274
— Carrots for,....... 66
— To Make Yellow in Winter, 37

C.

Calamities Changed to Blessings... 363
California, Farming in....... 192, 372
— Products of,...209, 216, 239, 286
Canada, Fruit Growing in,........ 276
— Thistles, To Destroy,...160, 194, 218, 356
Carnations and Picotees,......153, 219
Carrots, Culture of,......162, 177, 193
— and Deep Plowing, ... 376
— for Horses,................ 193
— for Swine,.......... .. 30, 61
CATTLE—Alderney, Butter from, 227
— Imported by Mr. Taintor 37
Ayrshire, Description of,...... 228
— Sale of in New Brunswick,.............. 304
— Butter from,........... 226
— Mr. Gray's,........... 194
Black Leg in,................ 62
Bone Sickness in,....111. 119, 159
Cows, Stables for,.....16, 62, 270
— Good,................. 381
— Milch, Winter Food for, 42, 63
— Product of Good, 63, 80, 119, 226, 227, 228, 273
— Best Feed for,......... 119
— Stoppage of Milk in,... 304
Care and Profits of,.......... 97
Experiments in Feeding,..... 270
Feeding Straw to,........... 222

Cattle—Galloway, Imported,...... 291
Grazing and Butter Making,.. 273
Hints on Stabling,........... 29
Heavy, ... 61
Hankering after Bones,...... 94
Horn Distemper,............. 95
Hereford Bull Cardinal Wiseman,..................... 158
Hoven in,................... 238
How to get Water for,....... 239
Improved Breeds in England,. 12
Imported by Dr. Wendell and others, ... 29
— by Livingston CountyCo. 189
— by Morris and Becar,.. 364
— by Mr. Thorne,........ 322
Importing, Loss of, in,........ 227
Improve your Own,.......... 270
Live and Dead Weight of,.... 190
Lice on, To Kill,.........190, 282
Large Herd of,.............. 245
Mr. Tanqueray's,............ 13
Mr. Chapman's Short Horns,.. 30
Mr. Gould's Short Horns and Devons,............... ... 37
Mr. Morris' Sales of,......... 162
Mange in,...........127, 130, 190
New-York and Ohio, ... 380
National Show of in Ohio,.... 129
Ox, Large,.................. 38
Oil Cake for,..............42, 160
Ohio, ... 129
Quarter Ill in,................ 158
Rules for Care of,............ 19
Ringworm, Scab or Itch in,.. 192
Short Horned Cow Jacintha,.. 94
— — Bull Glo'ster, ... 190
Sales of,........161, 195, 260, 323
Scab on Eyes of,............ 189
Show at Northampton,...... 367
Steers Training,............ 228
Terms denoting External parts of,...................... 31
To Prevent Winter Kill in,.... 37
Tumors on Necks of,......... 126
Twin Calves,................ 285
Want of Experiments in,..... 10
Warts on, Cure for,..130, 190, 229
Wintering, $300 Saved,...... 145
Yorkshire Cow,........... . 342
Cayuga County Fair,........... 356
Cement Water Pipe,.... .81, 174, 221
Charter Oak Grape,............90, 130
Chess in Wheat,.................. 265
— Exhibited by Prof. Mapes,.. 161
Chestnuts, Planting,.............. 317
Cherry Stones, Germination of,... 250
Cherry Trees, To Destroy Slugs on, 236
Cherries, Coe's Transparent,...... 123
— Early varieties of,.......... 271
— Hovey, ... 123
Chimneys, Smoky,................ 265
Churning by Steam Power,....82, 151
Churns, Kendall's,............... 65
Cider in Oil Casks,............... 148
— Mills, Portable, Jones',...20, 65
— — Kulp's 130
— — Hickok's.............. 326
Cisterns, Cheap,......74, 114, 229, 319
— Construction of,............ 236
— For Barns,................ 130
— Walls for,................. 272
Cleanliness and Neatness,........ 125
Clod Crushing in England,........ 76
Clover and Timothy, Seeding to,.. 258
— for Manure,............... 194
— Headers and Hullers,....... 258
— Small and Large Red,...... 30
— Seed, Farmers Should Save their Own,............... 305
— — Hullers,............... 305
— — Saved by Machinery,.. 211
Coal Tar for Paint,............... 181
— — on Lime Mortar,....... 285
Cod Liver Oil for Fattening Animals, ... 78
Cob Crushers,.................... 356
Common Schools, Importance of.., 130
Connecticut State Fair,........... 353
Corn Planters,.................... 193
— Shellers, ... 100
Cow Milkers, Worthless,......... 78
Country Gentleman, First Year of, 34
— — Notices of,...11, 65, 99, 195
Cranberry, Culture of,............ 11
Cream, Proportion of in Milk,.... 174
Credit Not Given,................ 322
Crops at the West, ... 242
— in Seneca County,........ 32
— in Great Britain,.......... 293
Cucumbers, Culture of,.... 187
— To Raise Early,........... 154
Curculio, Experiments with,...... 146
— Fenced out................ 157
— Matthew's Remedy for,123, 373
Currants, Pruning,........... 60, 122
— Best Varieties,.............. 122
Cuttings of Fruit Trees,.......... 321
— How to Make Strike, ... 279

D.

Daisy, White, To Kill,........... 292
Death of Charles Fox,............ 291
Delaware, Letter from, ... 131
Digging Machine, Gibbs,...... ... 48
— — Samuelson's........... 18
Discordant Views, ... 332
Discrepant Opinions,.............. 143
DOMESTIC ECONOMY:
Apples, how to Fry,.......... 375
Bee Stings, Cure for......310, 351
Beef, Salting for Summer Use, 64
Beds, Corn Husk, ... 375
Bone Felons, Cure for,.. 375
Burns and Bruises, Cure for,.. 138
Bedbugs, To Destroy,........ 255
Brick Hearths,................ 257
Cream, Proportion of in Milk, 174
Currant Wine, ... 255
Ducks, To Roast,........... 38
Eggs, To Preserve,........64, 125
Elderberry Wine, Recipe for, 310
Fruit, Drying,................ 253
Ginger Wine,................ 310
Green Corn Pudding,......... 310
Kindling Fires,.............. 255
Lard, Trying out,............ 375
Liniment, Valuable,.......... 351
Mint Sauce,.................. 255
Preserving Grapes,........... 324
Potatoes, Way to Spoil....... 38
Pumpkin Pies, How Made,... 64
Preparing Poultry 306
Rope Mats,.................. 257
Rice, To Boil,............... 255
Secret for a Farmer's Wife,.. 38
Sheep Skin Mats, How Made, 146
Vinegar from Beets,.......... 188
Washing, Economy in, ... 375
Wall Paper, To Clean........ 227
Wheat Flour, Bolted and Unbolted, ... 310
Wasp Stings, Cure for,....... 351
Drain Tile, Round or Horse Shoe, 130
144
Draining and Irrigation,.......... 208
— Brush and Tile,............ 15
— Cheap Mode of,.... 189
— Effects of,.....66, 260, 288, 292
— Ponds, ... 78
— Swamps, &c.,............. 298
Drains, Stone and Brush for,...... 280
Drilling Machines,................ 20
Drills, Seymour's,................ 301
Drouth, Effects of,............307, 312
Dutchess Co. Ag. Society,.... 293, 381
Dynamometers,................... 193

E.

Elm, Insects on. 225, 240
Entomologist Appointed,......... 195
Evergreen Seeds, To Vegetate,... 156
Evergreens for Protection,........ 250
— Transplanting,........ 188
Exaggerated Descriptions, ... 374
Experimental Farm at Moecrkern, 169
Experiments in Cultivation,....... 148
— with the Curculio,.......... 146
— in Feeding Cattle,.......... 270
— with Potatoes............... 341
— with Manures Proposed,.... 300
Experiments with Guano......... 114
Experiences in Farming,......21, 54

F.

Farm Account Books,............ 112
Farm Buildings, Mr. Calvert's.... 280
— — Mr Thomas'.......... 248
— Large...................... 36
Farmer's Independent Ag. Society, 259
Farming, Epitome of,. 38
— Experiences in,.........21, 54
— Index to Good,............ 38
— in Tennessee,............. 173
— in Bristol, Vt.,......... ... 82
— in Helderburgh,.........21, 54
— in Great Britain,.12, 37, 75, 105
— in Sandwich Islands,....236, 284
— in California,........., 292, 372
— Notes on,................., 74
— Practical, ... 32
— Profits of Accurate,........ 171
Farms, Shelter for,............... 297
F. C. L. and Prof. Mapes,.....151, 161
Fence Posts, Rotting of, ...143, 368
Fences, Cost of in Vermont,...... 259
— A Word about,............ 380
— Cheap and Substantial,.... 356
— Durable, ... 332
— How to Build a Good,...... 172
— Improved,................. 268
— Moveable, ... 128
— Wire, Construction of, ... 139
— — and Hedge,............ 215
Ferns, To Destroy,............17, 210
Field Culture in England,......95, 105
Fish Ponds, Artificial,........... 107
Flax, Culture of,.............107, 289
FLOWERS—Barren and Fertile,. 26
Carnation, Picotee and Pink, 153
219
Dictyanthus pavoni,.......... 314
For the Shade,............... 60
Gladiolus floribundus,........ 312
— gandivensis, ... 312
Habrothamnus corymbosus, .. 57
New Mexican Cactus,....... 89
Petunias,............. 278
Phloxes, Select List of,....... 157
Tiger Flower,... 278
Tropeolum Lobbianum, ... 278
Zauschneria Californica,..... 28
Food, Chemical Elements of,..... 255
Franklin Co. Ag. Society,......... 220
Frosts, Frequency of,............ 38
Fruit Buds, Production of,........ 61
— Drying..................... 253
— Growing in Canada,....... 276
— Market,................... 125
Fruits, French Names of,......... 252
— Native Localities of,....... 58
Fruit Trees, Culture of,.......... 251
— — Cuttings of,............ 321
— — Depth for Setting,...... 219
— — Disease in Bark of,.... 317
— — Guano for, ... 27
— — Insects on,............. 89
— — in Oregon, ... 27
— — Live Braces for,....... 252
— — Manure for,........... 60
— — Manuring, ... 151
— — Over Manuring. 219
— — To Keep through Winter 38
— — To Protect from Mice, &c.,............ 27
— — To Protect from Rabbits,................ 38
— — To Protect from Borers and Grubs,.......... 38

G.

Garden, Plan for Kitchen,........ 343
— Walks, ... 374
Gardens, Width of Walks in,..... 250
Gas Tar as a Paint,.............. 82
Gooseberry, Culture of,.......... 271
— Houghton's Seedling,....... 123
— Mildew on,................ 279
Granary, Rat Proof,.............. 258

Grafting, Best Wax for,......157, 186
— in Autumn,................. 88
— the Apple,................. 88
— the Peach,................. 56
— the Pear on Quince,........ 156
Grain, High Prices of,............ 143
— Mice in,................... 150
— National Consumption of,... 73
— Standard Weights of,....... 112
Grape, Charter Oak,............. 90
— Concord, History of,...... 123
— — Description of,.....345, 374
— Northern Muscadine,...... 340
Grapes, Foreign,..............49, 123
— Hardy,.................... 122
— Mildew on,................ 279
Grape Vines, Culture of,......... 279
— Frame,.................... 373
— — Borders for, &c.,....... 88
— — Pruning,............... 60
Grass, Couch, To Destroy,........ 258
— Kentucky Blue,........... 79
— Proper Time for Cutting,... 178
— Tall,...................... 291
— Timothy, Raising,......... 49
— Seeds, For Reclaimed
Swamps,................. 35
— — Mixing,............... 36
— — Sowing in Midsummer, 279
— — Sowing in Autumn,.... 306
Grasses, Culture of,.............. 179
— Important Suggestions about, 77
Grasshoppers Destructive,........ 374
Greene Co. Ag. Society,.......... 229
Green House, A Cheap,........ 61
Grubs, Salt for,.................. 275
Guano, Adulteration of,........... 227
— At the South,.............. 68
— Domestic,................. 144
— Experiments with,........ 114
— For Indian Corn,.......... 147
— For Gardens and Fruit Trees 27
— How to Apply,.........337, 345
— How to Procure,.......... 110
— Poison in.................. 69
— Premium for Substitute for,. 247
— Substitute for,............ 300
Gypsum as a Fixing Agent,...205, 344
— on Pastures,............67, 114
— on Peas,.................. 66
— on Potatoes,...........145, 207
— on Wheat,.........18, 145, 379
— To Save Labor in Sowing,.. 180

H.

Harrowing in England,........... 76
Harrows, Geddes' and Scotch,.... 181
Hawthorn Seeds, To Vegetate,.... 98
Hay, Best Mode of Curing,...208, 257
269
— Clover, How to Cure,...... 247
— Great Crop of,............ 365
— Ground..................... 277
— Press, Dederick's.......... 315
— Proper Time to Cut,....178, 208
— To Estimate in Bulk,....... 193
Hedges, Apple Tree,............ 49
— Hemlock,.................. 319
— Osage Orange,........... 339
— Wild Cherry,.............. 30
Helderburgh Farming,.........21, 54
Hickories, Transplanting,......... 322
Horse Power, Wheeler's......... 292
HORSES:
Breeding from Diseased Mares 246
Cheap Feed For,............. 193
Colts, To Wean,............. 67
Galls on,.................... 246
Health and Comfort of Horses
Sacrificed,................ 372
Hints on Stabling,............ 29
Heaves in,................... 305
Imported into New Brunswick, 17
Lice on,...................... 282
Sale of Famous,............. 261
Sampson, Stock of,........98, 127
Scratches, Cure for,..190, 282, 304
Sore Shoulders in,........... 228
Show of at Providence,....... 260
— at Brattleboro,......... 379
Horses—Staggers in,............. 282
Training Colts,...........206, 211
Terms Denoting External
Parts of,.................... 31
Horticultural Humbugs,.......... 155
Houses, Dampness in,............ 366
House Plants, Pots for,.......... 312

I.

Ice House, Defective,............ 195
— — Cheap,............316, 347
Ice in Cellars.................... 290
Illinois, Letter from,............. 98
Implements, Manufacture of,...... 129
— Importance of Painting,.... 125
Impostor Exposed,............... 98
INDIAN CORN—Culture of,..44, 63
118
Compost for,................ 321
For Fodder, Sown Broadcast,. 110
— — Culture of......216, 277
— — How to Cure,..110, 331
Lime for,.................... 47
Guano for,.................. 147
Large Crops in Kentucky,.... 50
Old Colony Sweet,........... 47
Stowell's Evergreen,.....227, 368
Should not Succeed Buckwheat 142
Time for Harvesting,......... 284
To Prevent Birds Pulling up,.. 47
Tall,......................... 291
Way to Make Manure for,.... 118
Information Wanted, 45, 84, 128, 189
195, 220, 322
Insects, Fight Against,........... 290
— on the Elm,............225, 240
Irrigation, Importance of,......... 241

J.

Jefferson Co. Ag. Society,........ 220

K.

Kentucky Blue Grass,............ 79
Kitchen Garden, Plan of,......... 343

L.

Land, Clearing and Cultivating
New,..................93, 206
— New Method of Fertilizing, 240
— Restoring Old,............ 147
— Reclaiming Wet,.......... 300
Lead Pipes for Water,............ 172
Ledyard Town Ag. Society....... 150
Letters from S. W. Johnson,..169, 212
..233, 369
— Prof. Nash,.........12, 75, 105
Letter from California,.......... 292
— — Illinois,................ 98
— — Oregon,............... 84
— — Minnesota,............ 227
Light Wanted,................... 380
Lightning Rods, Construction of,.. 182
Lime as a Fertilizer,............. 285
— for Sorrel Lands,.......... 308
— on Meadows,.............. 339
Liveforever, To Kill,.....317, 322, 371
Locust Trees, To Destroy Borers in, 186

M.

Madison Co. Ag. Society,......... 220
Magnolia, Splendid Specimen of,.. 254
MANURES—Application of,..79, 290
Advertised.................. 147
Adulteration of Concentrated,. 276
371
Bommer's Patent,............ 78
Bones, *See Bones.*
Corn Stalks for,.............. 148
Clover for,.................. 194
Covered and Uncovered,...... 209
Cellars for,.................. 225
Compost for Indian Corn,..... 321
Depth for Burying,........... 22
Drawing in Winter,.......... 52
Manures—" Economical,......... 239
Experiment with Proposed,... 300
Economy of,................ 331
For Fruit Trees,............. 219
Guano, *See Guano.*
— and Stable,............. 337
Gypsum, *See Gypsum.*
Home-made,................. 371
Hen,...................144, 148
How to Increase,.........241, 311
Liquid,.................116, 148
Manuring, Does it Pay?...... 364
Muck for,..............150, 218
— How to Use,............ 303
— Time for Digging,..... 298
— Lime and Ashes,....... 256
Mechanical Conveyance of,.. 283
Nitrate of Soda,.....183, 204, 207
Oyster Shells for,............ 42
Permanent and Impermanent,. 93
Pond Mud, Value of,......... 144
Plowing in Green Crops,..... 174
Poudrette, Home Manufacture
of,....................... 176
Preservation of in Summer,.. 255
Refuse of Blacksmiths' Shops. 195
Special,..................... 148
Shade as a Fertilizer,........ 240
Soapstone as a Fertilizer,..... 261
Treatment, Value, and Application of,..............308, 349
vs. Grain Selling,............ 37
Maple Sugar, Manufacture of,.... 64
— — Great Yield of,......... 144
Marl, Shell, as a Fertilizer,....... 48
— in Albany County,........ 355
— in Saratoga County,....... 355
Massachusetts Hort. Society,..... 376
Meat for New-York,............. 207
— Market Supplies,.......... 242
Melons, Culture of,...........187, 250
Method, Importance of,........... 10
Mice in unthreshed Grain,........ 150
Milking, Importance of Clean,.... 174
Milk, Is the First Poisonous,...... 254
Middlesex (Ct.) Ag. Society,...... 220
Millet, Culture of,............147, 339
Minnesota as a Fruit Country,.... 271
— Letter from,............... 227
— Products of,.............. 242
Montgomery (Ohio) Ag. Society,.. 67
Mountain Ash, To Raise from Seed 317
Monument to Mr Downing,....... 176
Moore's (D. D. T.) Farm......... 171
Mowing Machines, Russell's,..... 260
— — Ketchum's,.68, 93, 267, 287
Mulching, Error in,.............. 314
— in Winter,................ 57

N.

Nash, Prof., Return of,........... 37
— — Letters from,....12, 75, 105
National Consumption of Crops,... 73
— Cattle Show at Springfield O 207
261
New Hampshire State Fair,...... 355
New York State Ag. Society:
Annual Meeting,............. 85
— Fair of,................ 346
Notices of,.................. 22
Premiums Awarded,......... 87
Receipts and Officers,........ 85
New-York State Poultry Society,.
First Exhibition of,.......... 96
Exhibition at Utica,.......... 355
Nitrate of Soda as a Fertilizer,183, 204
207
Nitrogen in Vegetation,.......... 212
North Western Pomological Convention,..................98, 274
North Carolina University,........ 207
Norway Fir,..................... 121
Notes for the Month, 36, 67, 98, 129
161, 194, 226, 260, 291, 322, 355, 379
Nurseries and Nursery Agents, 92. 218

O.

Ohio State Ag. Society....... 69, 379
— Pomological Society,....... 343
Onondaga Co. Ag. Society,....99, 259

Onions, Culture of, 23, 187
— Large Crop of, 118
— Varieties of, 23
— Worms in, 261
Orange, Hardy Dwarf, 57
Orchard, A Fine One, 311
Orchards, Pruning, 217
— Renovating Old, 92
Oregon, Notes on, 84
Orleans Co. Ag. Society, 259
Oyster Shells for Manure, 42
Oxford Hoe Company, 129
Ox Yoke, Vose's Patent, 334

P.

Paint, To Remove, 65
— For Farm Buildings, 148
Parsley, Way to have in Winter, 89
Parsnips, Effect of on Butter, 225
Pastures, Plaster for, 67, 114
Paulownia imperialis, 186
Peach Trees, Disease in, 92
— — Grafting, 56
— — Protecting, 257
Peaches, Early, 250
— Early Tillotson, 58
— Druid Hill, 340
— For Vermont, 59
Pear Trees, Quince Stocks for, 59
— — Training Pyramidal, 25
Pears, Dwarf, 316
— — and Quince Stocks, 91
— Early Summer, 249
— For Vermont, 59
— Kirtland, 340
— Large, 58, 374
— Market, 317
— Notices of Standard, 313
— Prices of, 339
— Shepard, 345
— Sterling, 309
— Summer, 286
— Winter, Scarcity of, 185
Peas, Plaster for, 66
— Weevils in, 301
Peat Ashes, 339
— Coal as a Fixing Agent, 350
Pennsylvania State Ag. Society, 355
PERIODICALS:
American Agriculturist, 69
California Farmer, 129
Conn. Valley Farmer, 194, 380
Genesee Farmer, 68, 288
Gardener's Magazine, 322
Horticulturist, 374
Hovey's Magazine, 67, 123
Indiana Farmer, 323
Prairie Farmer, 67
Rural New-Yorker, 36
The Horticulturist, 271
Western Hort. Review, 37, 251
Working Farmer, 35, 151, 161
Phloxes, Select List of, 157
Pipes, Cement for, Water, 81, 174, 221
— Lead, 172
Pie Plant, Ashes for, 262
Pittsburgh Tile Works, 323
Plants and Animals, Good Condition in, 239
— Ornamental, Notes on, 271
— Value of Analyses of, 369
Plans for the Year, 51
— Laid in Winter, 79
Plowing, Deep and Shallow, 127
— Fall and Winter, 46, 272
— in England, 75, 105
— in Green Crops, 174
— Subsoil, 332
— Trench, for Fruit Trees, 97
Plows, Michigan Double, 36, 43, 258
— Rich's Cast Iron Beam, 319
— Seneca Co., 66
— Sod and Subsoil, 217
Plum Trees, Black Rust on, 254, 338
Plums, New Varieties, 349
Poetry, Farm Life, 176
Pond Mud for Manure, 144
Pork, Cost of Making, 304
Posts, Heaving by Frost, 81
— Fence, Rotting of, 123, 368
Poudrette, Home Manufacture of, 176
POTATOES—Culture of, 80, 110
Great Crop of, 195
Large and Small Seed, 341
Plaster for, 145, 207
Rot in Great Britain, 33
— Composition to Prevent, 130
— Prevented by Sowing Ashes, 161
— — by Drying the Seed, 330
— Chandler's Remedy for, 355
Seedling, 380
Stone Hill, 379
Wendell, 376
POULTRY—Andalusian, 238
Ducks, Black Cayuga, 193
Dorkings with Yellow Legs, 277
376
Exhibition of at Albany, 36
Fancy in England, 93
Feeding, 306
Game Fowls, 229, 259
Gapes, Cure for, 224, 277, 351
House, Cheap, 222
Imported by S. W. Jewett, 191
Preparing for Market, 306
Prize, 381
Profits of, 47
Profitable, 116
Remarkable Hen, 261
Sale of Imported, 381
Sales of, 97
Seabright Bantams, 224
Setting Hens, 351
Shanghais, 351
Turkeys, Live and Dead Weights of, 354
Pruning in Winter, 60
— Orchards, 217
Pump, Engine Force, 306
Pumpkins from One Seed, 58
Putnam Co. Ag. Society, 181

Q.

Queens Co. Ag. Society, 290
Queer Logic for an Editor, 288
Quince Stocks for Pear Trees, 59

R.

Rain Gauge, How Constructed, 307
Rambouillet Sheep Farm, 318
Rape, Culture of, 138
Raspberry, Knevett's Giant, 27
— White, 279
Reapers and Mowers, 225, 321
— Trial of in Illinois, 291
— National Prejudice about, 16
— Progress of, 33
— Reels for, 81
Reform Needed, 50
Rensselaer Co. Ag. Society, 259, 334
Rhode Island State Ag. Society, 194
Roads, Levelling Winter, 32
— Telford, How Made, 267
Rockingham (N. H.) Ag. Society, 259
Roller, Cheap Farm, 49
Roofs, Composition, 47
— Slate for, 342
Roses, Budding, 252, 374
— From Eyes, 28
— Select List of, 157
Rotary Spade, Gibb's, 48
Rotation of Crops, 219
Root Culture, 83
— Crops, How to Store, 352
Rural Conveniences and Animal Comfort, 9
Rutabaga, Culture of, 180
— — Value of for Cattle, 270

S.

Salt for the Grub, 275
— Influence of on the Cherry, 99
Samuelson's Rotary Digger, 18
Sandwich Islands, Agriculture of, 226
284
Sap Spiles, Machine for Sharpening 154
Scions, Inverted, 317
Seasonable Hints for July, 216
— — for October, 298
— — for November, 352
Season, Crops, &c, 275
Seed Planter, Bullock's, 193
Shade as a Fertilizer, 240
SHEEP—Cotswold, 228
— Where to be had, 258
Establishment at Rambouillet, 218
Feed of Large and Small, 202
For the South, 368
Heavy, 68
Husbandry, Profits of, 62
Imported by S. W. Jewett, 191
— by Messrs. Campbell and Chamberlain, 226
— by Mr. Chapman, 291
Lambs, Docking, 223
Models of, 98
New Oxfordshire, 95, 130
Productive, 239
Poisoned, Remedy for, 252
Profitable, 95, 153
Sales of, 129, 194
Shelter for, 63
Spanish Merinos, 262
South Down, Where to be had, 17
— — For Mutton, 38
— — Notices of, 31, 261
Worms in Head of, 192, 223
Shelter for Farms, 297
Skunk Cabbage, To Destroy, 193
Singular Theorizing, 322
Slate for Roofing Purposes, 342
Smut in Wheat, to Prevent, 17
Soapstone as a Fertilizer, 261
Soils, Improvement in, 302
— Mixing, 84
— Practical Value of Analyses of, 233
Sorrel, To Destroy, 290, 308, 356
Squashes, Large, 356
— Valparaiso, 48
Stables, Flooring for, 272
Steam Engine for Farm Purposes, 260
Stick to the Farm, 175
Stock, Sales of in Addison County, 227
— for the West, 379
— for South America, 380
Stone wall, 246
STRAWBERRIES:
Best Varieties, 122
Culture of, 309
Destroyed by Grubs, 88, 124
Hautbois, 96
In Winter, 57
Large, 292
Perpetual Bearing, 90
Profitable Bed of, 157
Soils for, 123
Straw Cutter, Kinds of, 162
Self-Sharpening Yankee, 45
Striped Bugs, To Destroy, 187, 217, 279
Steuben Co. Ag. Society, 37
Stump Machine, Cheap, 205
— — Stewart's, 177
— — Construction of, 287
Stumps, To Hasten Decay of, 193, 205
Superphosphate of Lime, Mr. Butterfield's Experiment with, 55
— — — Mr. Morris' Experiment with, 84
— — — Mr. Frost's Experiment with 109, 151, 161
— — — Mr. Curtis' Experiment with, 114
— — — on Vegetables, 194
Sugar, Maple, To Make Good, 64
— — Great Yield of, 144
Swamp Land, Fruit on, 122
Sweet Flag, to Destroy, 43
SWINE—Cost of Fattening, 304
Fed on Beach Nuts, 162
Feeding Breeding Sows, 222
Fine Pigs, 68, 69, 116, 129, 130
Green Corn Stalks for, 333
Imported by Mr. Jewett, 191
in Indiana, 356
Portuguese, 344
Sales of, 126, 239, 261
Suffolk, 126, 191, 372
Whey for, 246

T.

Tansy, To Kill,.................. 317
Tennesee, Farming in,.... 173
Terra Culture, Comstock's,....... 225
Theorics and Experience,......43, 83
Thermometer for Farmers, ... 267
Thorough Tillage, ... 341
Threshing in Winter,............ 38
— Machines, Wheeler's,...... 292
Timber, Proper Time to Cut,..... 201
Tobacco, Culture of in Northern States, ...108, 142
Town Ag. Societies,............. 193
Transmutation, Astonishing,...... 374
Transplanting Evergreens,....... 188
Trees, Encouragement to Plant,.. 205
Turnips, Culture of,..........138, 292
— Injurious to SucceedingCrop, 194

U.

United States Ag. Society,.....60, 290
— — — Annual Meeting of, 116

V.

Vegetable Weeder,.............. 161
Vegetation, Influence of Ammonia on,........................... 335
Ventilation of Houses,........... 299
— of Hay Stacks, ... 246
Vermont State Ag. Society,....66, 220
— — Annual Fair of,........ 320
Vines, to Protect from Bugs,..187, 217, 279
Virginia State Ag. Society,....69, 220

W.

Water Pipes, Cement for,.81, 174, 221
— in Lead Pipes,............ 172
— Rams, Arrangement of,.... 160
Weeds, Plowing in, ... 43
— Importance of Destroying, . 210
— Remarks on,.............. 323
— To Destroy,.............. 242
We have Compassed this Mountain long enough,.................. 41
Western Va. Ag. Society,........ 293
WHEAT—Crops, Good, ...31, 35
Chess in, ...161, 265
Culture, Experiments in,.... 341
Crop in California,........... 209
— in Ohio,............... 227
Wheat—Drills,................193, 292
Gypsum on,.....18, 145, 299, 379
Insect in,.... ....266, 279
Mediterranean,......303, 307, 333
Peculiar Prcperty of,......... 308
Prolific Yield of,............. 356
Spring, Culture of,........82, 141
Smut in, to Prevent,.......17, 210
Weevil in,........... 254, 266
— Proposed Remedy for,.. 275
Without Summer Fallowing,. 269
Years Variable,............. 69
Willow, Varieties and Culture of,. 15
Windham Co. (Ct.) Ag. Society,.. 272
Wind Mills, Construction of,..... 256
— for Farm Purposes,........ 115
Wood Lands, Pasturing, ... 259
Wool, Fine Samples of,.......130, 194
— Heavy Fleece of,.......... 261
Working Farmer, Reply to,...35, 380

Y.

Yale College Lecturcs,........... 37
Yates Co. Ag. Society,........... 220
Yellow Dock, to Destroy, ... 276

INDEX TO CORRESPONDENTS.

MAINE.

A Subscriber,.................... 219

NEW HAMPSHIRE.

A Farmer,....................... 304
Dean, W. R., ... 64
Eastman, Jesse,.................. 52
French, Henry F.,................ 175
P. M., ... 43

VERMONT.

Alla Du Pays,.................... 277
Arms, A. D., ... 172
A Subscriber,..................82 285
Babcock, Charles,........95, 223, 351
Bailey, D. P.,.................. 188
Brewster, Wm.,.................. 95
Colburne, J. W.,....118, 223, 276, 311
D. C. L., ... 17
Edgerton, J. L.,..........78, 300, 317
Holden, E. L.,................... 95
H. S.,.......................48, 59
J.,............................. 211
Jewett, S. W.,.................191, 257
McKee, John,.................... 83
Smith, J. N.,.................... 218
Spencer, L. B,.................. 162
Vermonter, ... 63

MASSACHUSETTS.

A Housekeeper,................... 64
Bulkley, D. A.,... ....129, 145
Butterfield, L.,.................. 55
C. G.,.......................... 119
Childs, James,................... 119
Cruikshanks, G.,................. 229
C. S.,.......................... 210
Curtis, L. W.,................... 114
Ela, W. A., ... 97
E. N. N., ... 368
Nash, J. A., ...111, 173
N.,...................... 80, 93, 110
P., ... 217
Parsons, John, Jr.,............ . 146
Perkins, C. C.,...............180, 190
Proctor, J .W.,................23, 287
Roberts, A. J.,...............154, 374
Sargent, W. P., ... 88
Smith, L.,....................... 241
Sumner, S. B.,................... 116
Willard, L. A., ... 193

CONNECTICUT.

Alleyn, C.,..................228, 321
Andrew, John T.,................. 202
A Subscriber,.................... 147
A Subscriber who has tried,...... 45
A Young Farmer,................. 220
Brown, L. A., ...157, 284
Clift, L. D ,..................... 27
Cowles, S. W., ... 272
D., ... 215
Deming, S., ... 45
Gold, T. S., ... 140
Gridley, Mark, ... 128
Griswold, L.,................207, 228
Hart, T. L., ... 304
Hurlburt. J.,.................153, 303
Moore, Eli, ... 270
Pettee, W. J , ..79, 177, 192, 193, 268
Practical, ... 309
Pratt, P., ...80, 148
Ramsay, J ,..................... 222
Tiffany, H. L., ... 301
Tuttle. N. T.,.................... 94
Walbridge, P., ... 119
Wanzer, A., ...60, 64
Yeomans, A., ... 246

RHODE ISLAND.

Warren, W. G ,.................. 219

NEW YORK.

A., ... 11
A. C. J ,........ 267
An Old Farmer, ... 242
A New Subscriber,................ 82
A Reader,........................ 47
A Steuben Subscriber, ...84, 220
A Subscriber,.....35, 43, 88, 158, 272
B. F. H.,........................ 11
Bingham. J., ... 225
Bliven, H. ,..................... 238
Brewer, W. H., 77, 157, 205, 240, 243, 342, 344
Buckley, S. B.,..........108, 185, 307
Bulkeley, D. E.................. 355
Butterfield, A.,.......... ...221, 319
Cavert, M. P.,........ 126
Chapman, John R.................. 110
Chapman, S. P., ... 30
Clark, J. S.,.................... 126
C. N. B.,....................282, 285
Cross, Elihu,..... ..124, 144, 240, 252, 254, 256
Dairyman, ... 62
Daniels, E., ... 292
Dudley, G. A.,................... 30
Dickinson, A. B., ... 273
Durant, G. W.,....... 21, 54, 113, 177
E. C ,................. 160
Fahnestock, A.,. 123
Farmer of Duchess,............... 147
F. D. C., ...333, 338
Goodwin, S. D., ... 371
Griffing, E., ... 30
Hanchett, G A.,........ 151
Hinman, S.,..................... 90
Hoag, Elijah, ...174, 177
Holindo, ... 269
J. G. K.,......................11, 112
J. F. P., ... 290
Johnston, John, ..32, 66, 144, 178, 254
K—*—J,......................... 300
Keeler, Henry, ... 301
Keith, L., ... 142
Kirtland, D.,.................... 351
L., ... 205
Lema, ... 241
Longett & Griffing,.............. 84
L. V. W.,........................ 53
McMillen, J., ... 84
Merchant, R., ...144, 342
Moss, A. S.,..................... 63
Non Epicurus, ... 375
Otsego,......................... 222
Page, J. R.,..................... 191
Pardee, R. G., ...57, 90, 127
Parlin Franc, ... 44
Pierce, M. A.,................... 127
Phillips, G. D.,.................. 179
Rawlins, J. H.,.................. 310
Reid, T. D.,..................... 148
Richards, D. B., ...63, 65, 122
S., ...32, 52, 59
S. A.,.......................... 215
Sanders, E. ,. 57, 59, 60, 124, 153, 219, 314
Saunders, A. L.,................. 100
Smith, C.,....................148, 376
Smith J. H.,..................... 62
Staten Islander, ... 15
Stone, N.,....................... 278
Stout, John H.,.................. 186
Todd, S. E.,...................46, 275
V. W. S.,................48, 180, 186
W., ... 83
Walker, A., ...279, 277, 282
Wallace, James, ... 147
Wendell, H., ... 376
W. D. S., ... 189
Whittlesey, P.,.................. 190
Wilbur, J.,. 189
Williamson, W., ... 65
Winthrop, J.,. 62
W. M. C.,...................... . 251

NEW JERSEY.

Adams, L.,...................... 60
C. W.,......................308, 377
F. C. L.,....................109, 151

Frost, L. C., 151
J. S. C., 89
Kappa, 330
Savage, G. W., 92, 224

PENNSYLVANIA.
A Clergyman, 145
A New Subscriber, 82
An Agent, 65
A Subscriber, 16
B. B., 177, 288
Bowman, J. L., 27
Chester County, 189
E. S. D., 89
F. G., 47
G. E. H., 43
Goe, J. S., 262
Hamilton James, 92
J. H., 74, 84
Meyer, J. G., 266
R. U. M., 144
Way, P. A., 142, 205
Woodburne, William, 229

DELAWARE.
A Subscriber, 131
Delaplain, J., 88

MARYLAND.
A Young Farmer, 345
Brand, W. F., 225
Calvert, C. B., 280, 337
C. V., 149

VIRGINIA.
A Subscriber, 299
Bidwell, M. S., 228
Machen, L. H., 221
Slaughter, W. B., 219

WISCONSIN.
Kummel, A. H., 322
Phœnix, F. K., 274
Sherwood, S. J., 266

SOUTH CAROLINA.
J. D. L., 245
Stewart, R., 210

OHIO.
Baldwin, H., 221
Bingham, R. F., 47
Burrell, Martin, 351
C. S., 89
Donaldson, J. A., 250
Gibbs, O. C., 19, 56, 254
Hitchcock, James, 60
Jenkins, James, 122
J. S. H., 206
Mattison, J. H., 114, 206
Novice, 93
O. C. G., 245
Russell, J. S., 279
Woodburne, J. H., 222
W. P., 174

KENTUCKY.
A Constant Reader, 321
A Subscriber, 79
Dobyns, J. P., 374
Tebbs, S. F., 50

TENNESSEE.
A Subscriber, 173
Branner, B. M., 162
E. L., 182
Henry, A., 218

MICHIGAN.
Fitch, M. L., 188
Harvey, B. J., 62
Observer, 107, 127, 143, 269, 365
W. H. S., 290

INDIANA.
Cole, A. A., 15
Craig, John J., 74
S. D., 17
Lowry, S., 78

NORTH CAROLINA.
A Subscriber, 252
F. K. A., 147

ILLINOIS.
A Subscriber, 98
Fairbairn, W. R., 194
H. M. N., 239
Moore, John L., 49
R. J. W., 310
Williams, A., 157

OREGON.
A Subscriber, 84
G., 17, 27

MINNESOTA.
A Subscriber, 227
Kelly, O. H., 242

CALIFORNIA.
Chaffee, N. E., 188

FOREIGN.
A Canadian, C. W., 268
A Subscriber, Sandwich Islands, 284
Borrowdale, J., C. E., 66
Cuming, A. B., N. B., 159
Johnson, S. W., Germany, 169, 212, 226, 233, 308, 335, 349, 369
J. S., N. B., 150
McKay, F., Nova Scotia, 81, 98
Nash, J. A. London, 12, 37, 75, 105
Reid, J. H., N. B., 138
Sherwood, W. H., C. W., 276
Simpson, J., C. W., 172
Watson, R., N. B., 42
W. S., C. W., 88

UNKNOWN.
Adams, Benjamin, 92
Ford, W. N., 142
Potter, W. F., 112
Roe, N. S., 122

INDEX TO ILLUSTRATIONS.

BUILDINGS.
An Italian Country House, 120
Cheap Green House, 67
Design for School Houses, 184, 185
Mr. Calvert's Barn, 281
Plan of a Barn, 268
  — of a Country House, 56
  — of a Farm, 248
  — of a Piggery, 152
Poultry House, 222
Spacious Country House, 24

CATTLE.
Explanatory Figure of, 31
Hereford Bull, Cardinal Wiseman, 158
Short Horned Cow, Jacintha, 94
  — — Bull, Duke of Glo'ster, 190
Yorkshire Cow, 33

IMPLEMENTS.
Digger, Samuelson's Rotary, 18
Harrow, Geddes Improved, 181
  — Scotch, 181
Horse Power, Emery's, 164
  — — Wheeler's, 133
Mowing Machine, Ketchum's, 132
Plow, Michigan Double, 217
  — Rich's Cast Iron-beam, 319
Spade, Gibbs' Rotary, 48

HORSES.
Explanatory Figure of, 31
Horse's Foot, 31

SHEEP.
New Oxfordshire, 95

POULTRY.
Sebright Bantams, 224

SWINE.
Suffolk Pigs, Mr. Clark's, 126
  — — Mr. Page's, 191
  — Mr. Sherwood's, 372
Portuguese, 344

FRUITS.
Blackberry, Lawton, 91
Grape, Muscat of Alexandria, 59
Pears Early Summer, 249
  — Standard, 313
  — Summer, 286
Raspberry, Knevett's Giant, 27

TREES AND PLANTS.
Hardy Dwarf Orange, 57
Norway Fir, 121
Pruning Grape Vine, 66
Pyramidal Pear Trees, 25, 20

FLOWERS.
Carnation, 153
  — Layering, 219
Flowers, Pots for, 312
Gladiolus floribundus, 312
  — gandivensis, 312
Habrothamnus corymbosus, 57
New Mexican Cactus, 89
Picotee, 153
Tiger Flower, 278
Tropeolum Lobbianum, 278
Zauschneria Californica, 28

MISCELLANEOUS.
Boiler, Mott's Patent, 188
Cisterns, Construction of, 236
Engine Force Pump, 306
Fence Improved, 268
  — Wire, 139, 140
Fruit Dryer, 253
Grape Frame, 373
Hay Press, Dederick's, 315
Horticultural Humbug, 155
Kitchen Garden, Plan of, 343
Mulching, Diagram in, 314
Ox Yoke, Vose's Patent, 334
Stump Machine, 287
Telford Road, 267
Wind Mills, 256
  — Power, 115

FORBES. THE CULTIVATOR. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

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Rural Conveniences and Animal Comforts.

VERY few persons fully realize the beau ideal of comfort in the country, although it is by no means very difficult of attainment. Luxuries of the first class, may be supplied by the fruit and kitchen garden, the orchard, and through a well-kept stock of domestic animals. We do not allude to the common, slip-shod and imperfect way in which these supplies are obtained; that is, by means of late and stunted vegetables in a weedy and unmanured garden, or fruit of a doubtful character, on neglected, moss-grown, unpruned trees, and every thing else of a similar style of production. These cannot be called luxuries, and even the inhabitant of dense cities, who sees only brick walls, and one small patch of clear sky just overhead, may get much better at the nearest market, on the corner of the next street. What we allude to, are articles of much higher perfection—the best early vegetables from the hot bed; the most delicious raised in the open garden; fruits of the most improved varieties, under the best cultivation, and comprising the whole yearly circle, from the earliest strawberries and cherries, through the profusion of sorts that ripen in summer and autumn, to the finest long-keeping apples and pears. Every one, almost, has plenty of fruit during a certain brief period in autumn, and some have a partial or occasional supply through a large portion of the year; but very few are able to place a fine dish of the best upon their tables for every day of the year. The animals of the farm contribute their share; "the flowing cup, fresh from the dairy virgin's liberal hand," as Armstrong expresses it; real genuine cream for the strawberries, and not the market mixture of chalk and milk; a fowl for the table, when needed, and plenty of fresh eggs from the poultry house at all times; these all contribute much to the comfort of country life. But these are not all; the neat residence, the well kept ornamental grounds, the well furnished rooms, the intellectual food of books and papers, all have a large share in making up the complete whole.

But while the country resident is providing for his own convenience, he should not forget the comfort of his domestic animals. It is always gratifying to see the same complete system of convenience in a farmery, as in the most perfect and best kept family residence. Warm, well ventilated, well littered stables, thoroughly cleaned at least twice, but better three times a day, are not so rare as ample provision for the smaller animals. All animals are most liable to disease, and most subject to a loss of flesh, when suffering from any kind of discomfort, among the most prominent of which are badly cleaned floors and an impure atmosphere. Good milk is not to be expected, nor good butter to be made from cows suffering under these unfavorable influences. A very rare thing is a clean, inoffensive piggery. Every pig-house should have a smooth, hard floor, so as to be constantly scraped and swept, by the easiest possible removal of the accumulations. Where several inches of peat or turf are deposited, for them to root and burrow in, (when the weather is not freezing.) this should never be allowed to remain long enough to create an unpleasant odor, and a hard floor will contribute much towards its easy removal. How much better would be such special provision as this, than the more common practice of allowing swine to roam the barnyard among cattle, seeking shelter and cleanliness, but finding none. Fowls are very sensitive to cold and discomfort. We have examined many well made poultry-houses, but scarcely one kept constantly sweet and clean. It costs but little more to remove a peck of hen-guano, in light semi-daily instalments, than at one weekly and disagreeable operation. Sheep would grow and thrive, and survive our winters enough better to pay for artificial shelter in a year or two, if comfortable sheds and dry yards were provided for them, and sufficient divisions made for keeping the various classes of weak and strong, young and old, separate.

Complete ranges of buildings to furnish ample provision for all these purposes, should be regarded as a sine qua non of every good farm; and if the tools and implements, also, could be only regarded as having some degree of sensation, perhaps better care would be taken, and better shelter be provided for them. Carts, wagons, and plows; rakes, hoes, and forks; harrows, cultivators, and drills, should as much have special rooms provided for them, in which they should be carefully kept when not in use, as the favorite horse.

There is one other room of a different character, which should never be omitted on any farm of considerable size, but of which nearly every one is entirely destitute. This is a *business office*, attached to the dwelling, where the account books are kept, where hired men are settled with and paid, where bargains are made with business men, and all consultations of a business character are held. Such a room need not be more than ten or twelve feet square, and may be of very simple construction, warmed by a small stove, and not consuming a cord of wood in a year. If the farmer does not himself see the advantages of such an office, every neat house-wife most certainly will, who is so often annoyed by such transactions in those singularly appropriate places, the parlor, or around the kitchen cook-stove.

We might add to the list of country conveniences, good, well gravelled farm-roads; well paved or flagged barn-yards; and self-shutting and self-fastening gates for the different fields.

Want of Accurate Experiments in Cattle.

At the late fair of the New-Hampshire Agricultural Society, Gen. Glidden remarked that he had gone into *Devon* stock, and had lost by it in the weight of his cattle. The *color* was excellent, and that had introduced the stock throughout the State; it could have been nothing else, for this breed was deficient in fattening, working, and milking qualities. Other people might favor them, but when he found a Durham, or a native calf, weighing 20 lbs. per quarter, while the Devon weighed but 15 lbs. per quarter, he should be in favor of the larger breed.

This mode of judging of the value of breeds is very common, and often very erroneous. A thousand dollars in small bills is worth the same sum in large ones; a thousand bushels of corn converted into a thousand dollars' worth of beef in small animals, is worth more than if converted into five hundred in large animals. Large ones, it is true, are the most imposing in appearance; but the question is, what have they cost in raising? This is a question which is rarely asked and never answered, in all the controversies about the relative merits of Durhams and Devons, Merinos and South Downs, Berkshires and Landpikes, Suffolks and Alligators, Shanghais and Bantams, Dorkings and Polands, but which would quickly settle many disputed points. An extraordinary cow will make sixteen pounds of butter per week; but what is the relative cost of this butter, as compared with the product of the eight-pound cow? Is poultry in a ten-pound carcass, cheaper or dearer than poultry in five-pound animals? Are the Brahma-pootras or the Dorkings raised at least cost? The time expended in controversies of this character, would have long ago settled the question if employed in well-conducted experiments. A peculiarity of the philosophy of the ancients was their exclusive adherence to speculative reasoning—they preferred disputing for ages, to observing or experimenting for an hour; this absurdity was long since exploded by Lord Bacon, but has been lately revived by stock-breeders; and we should be glad to see at least half a dozen of the most enlightened State agricultural societies, turn over a new leaf, and sustain the philosophy of Bacon by instituting experiments on the subject.

Government Aid to Agriculture.

F. P. Blair stated, in his late Address before the Agricultural Association of Montgomery county, Maryland, that Congress pays annually the sum of about *one hundred thousand dollars* for the publication of the Agricultural Report from the Patent Office. This report is of importance, mainly, to the congressional printer, its contents being comparatively of little value to the public, while the sum paid for it is more than enough to endow and support an Agricultural College and an Experimental Farm.

Must this money continue to be very nearly wasted, or shall an effort be made to secure its appropriation for a wiser and more practical purpose?

Suppose, for instance, that Congress should issue $300,000 in five per cent. stock, $200,000 of it to be appropriated to the purchase of Mount Vernon, and the other $100,000 to the erection of the buildings, &c., necessary to prepare it for an Agricultural Institution. This would absorb for interest on the stock, but $15,000 a year, leaving a balance of $85,000 for the annual support of the establishment. This would make an institution certainly as creditable to the country, and infinitely more useful, than the military academy at West Point.

Have the United States Agricultural Society, the several State Agricultural Associations, and the whole farming population of the country, sufficient influence to procure from Congress a change of this $100,000 appropriation for this desirable object? We believe it can be accomplished; and we should be glad to see the United States Agricultural Society, or the State Agricultural Society of New-York, take the initiatory steps toward its accomplishment. In what better work can they engage?

Importance of Method.

No greater element of success can be introduced into the habits of the agriculturist, than a strict, methodical manner of conducting the business of the farm, and no deficiency will more largely detract from his prospect of success, than a lack of method. The contrast between the man of method and the man without, is vivid in the extreme. The business affairs of the one are in all manner of forms and conditions, save in a prosperous form, while those of the other are, in sailor parlance, 'snug, trim and all ataut.' The contrast in prosperity and general enjoyment of life is fully as great as in the externals of business affairs.

The *successful* management of a farm requires a vast amount of care and attention, a close oversight; in short, an incessant watchfulness. There must be brought to the task no insignificant quantity of the most multifarious talents, and they must be steadily and sturdily exercised. The details of farm management are of the most extended and complicated character, and can be fully and successfully compassed, but by the active exertion of a disciplined and educated mind, which must call out its full resources, not forgetting the systematic arrangement, and prompt execution of all requirements for labor and skill.

That is a trite old maxim which sayeth, "A place for every thing and every thing in its place." Were it added, that the *place* be under a shelter, the addition would be an emendation. The farmer who lacks method has many places for every thing, and far too frequently places of full exposure to the vicissitudes of the weather. The loss consequent upon such exposure is no small item in the year's account, and the loss of *time*, though too little heeded, will often engulf the year's profits.

The orderly arrangement and systematic conduct of all matters pertaining to the farm establishment is not only indispensable to the profitable management of the same, but is also a sine-qua-non, with regard to the pleasure which is to be derived from rural life.

Orderly arrangement leads to *neat* arrangement, and therefrom springs the sure beginnings of refinement and rural taste, which is a way-mark in the direct road to intellectual culture, honor, usefulness, true gentility, and a happy life. J. G. K. *Dryden, N. Y.*

"The Country Gentleman."

L. Tucker, Esq.—There is a debt of gratitude due every man whose mind grasps the wants of his fellow men, and especially is such the case where that man has the soul and energy necessary to the supplying of that want. In the establishment of the "Country Gentleman" a present public necessity was met, and we who have witnessed its success, and the vastness of its design, are not disposed to withhold the meed of praise due the projector of such an enterprise.

The wants of man are not numerous. An All-wise Creator has supplied our necessities with a boundless lavishness, and nothing is left for us to do but appropriate His bounties; but to do this effectually, mind wants aid, thought must be expanded—such thought as tends to enlarge our views and invigorate the dormant faculties. Farmers, who are the pride of our country, understand the force of such helps, especially those of them who have been constant readers of your paper. They are more than ever acquainted with the personification of a true gentleman, and are beginning to associate him with the soil. An intelligent, industrious cultivator, above all others, has approximated to the dignity of a gentleman.

Proofs of the immense good that has been accomplished through the dissemination of agricultural science can be easily arrived at, by going back with memory to the first issue of the "Albany Cultivator." Who will attempt a calculation of the amount of improvement made since then in the agricultural pursuits of our own state? Who has the ability to compute the exact amount of manly, intelligent progress made among farmers? We behold the fruits of such efforts as are being put forth through the columns of the "Country Gentleman" and "Cultivator," and in our hearts are thankful for their boundless supply of our mental wants.

It only remains for me to add, by the perusal of your paper, I have been led to appreciate its merits, and esteem it a pleasure and a duty to recommend it as worthy the patronage of every man who wishes to be well informed, be he farmer or tradesman. A.

Culture of the Cranberry.

Warwick, N. Y., Nov. 9, 1853.

Messrs. Editors—Can you, or any of your correspondents, inform me as to the best mode of raising the cranberry for market. I have a piece of bog meadow (muck or black dirt) which is too wet for the cultivation of grain, and which cannot easily be drained; and thinking the cranberry could be raised to advantage on such soil, I ask for information from you or your correspondents, and will be greatly obliged if you could inform me where to procure the plants. With respect, yours, &c., B. F. H.

We are gratified in being able to give, in answer to the above inquiry, the following valuable paper on the culture of the cranberry, which we find in a late number of the *Boston Cultivator*. Plants can be procured of F. Trowbridge, New-Haven, Conn.

John E. Howard, Esq., supervisor for the Plymouth county (Mass.) Agricultural Society, in his late able report, states that the committee appointed to consider the subject of the culture of cranberries, recommended that the first prize of $10, be awarded to Thomas H. Sampson, of Pembroke.

His mode of culture is given as follows:—Having succeeded with great labor, in clearing the brush and larger wood from two pieces of low, moist swamp land, a deep vegetable soil; and having pared and removed the turf and tussoc stools from their surface, he proceeded to set his plants. This was done in different years, commencing in the spring of 1846, and ending in the fall of 1852. It consisted in placing small square sods containing them, cut from a bog meadow, in holes dug for their reception, at short distances apart; and then drawing the soil around in such manner as to secure the sods with their contents in their new position. This labor seems to have been performed without any view to subjecting the plants to any subsequent course of culture, which they appear not to have received.

Of these two pieces of land, one exhibits the plants, more especially, in different stages of their growth; some having been recently set out, looking puny and feeble, and showing scarcely any runners; others of older date, looking stronger, with runners more numerously thrown out and extended. But of the larger part of those, and of all the other plot, the vines cover the earth as with a mass of net work, although they do not constitute the exclusive growth, appearing in a most healthy and highly vigorous state, and bearing—a spectacle gratifying, it may be supposed, to the proprietor to behold—a most luxuriant crop of sound, bright, sparkling fruit.

One square rod of these vines, it is stated, produced six and a quarter pecks, being at the rate of two hundred and fifty bushels to the acre.

The supervisor recommends the following mode of cultivating this valuable fruit:

Select for the purpose a deep vegetable soil, pare and remove the turf from its surface, dress, if practicable, with fine sand, (not soil) or some better material; set the plants, giving them fair working distance, and then for the space of two or three years use all diligence to help them to hold and occupy, not, in any sense, as commoners or co-partners with other products, but as sole tenants, which they will not be backward in seeking to become. I will only add, that if the waters of any small stream near at hand can be so controlled as to throw a thin sheet over the surface, during winter, and, occasionally, perhaps, for a brief while, at other times, to refresh and invigorate its occupants, and prevent injury from frosts, which sometimes happens, it would be a desideratum connected with the object in view, of much importance.

Letters on British Agriculture—VIII.

IMPROVED BREEDS OF CATTLE.

LONDON, Oct. 31, 1853.

L. TUCKER, ESQ.—It is no secret that domestic animals, *well born* and judiciously managed, are profitable, while those of low origin and meanly provided for, seldom repay the expense bestowed upon them. To rear pigs that will give more pork than bristles; sheep that will afford fine wool and fine meat; and horses that gratify a just admiration of strength, elegance and graceful movement, is certainly wiser than an opposite course. So with regard to horned cattle; there can be no doubt that those of good parentage and well reared will give an earlier and a better return. Wisdom, in this matter, if not in all others, is better paid than folly.

British agriculturists have long understood this, have reared their best calves for the sake of the future herd, instead of consigning them to the shambles because they would bring a little more ready money; have brought those animals together, which, according to the ascertained laws of propagation, would be likely to produce the best progeny; and have already received their reward, not merely in the possession of here and there a fine animal to admire and to sell for a great price, but in the general improvement of farm stock. I have spent much of this day in the Smithfield market, and I hardly know which most to admire, those splendid animals seen at the agricultural gatherings, or the thousands upon thousands of good, well fattened cattle, exhibited in the market. Unquestionably, *the raising and propagation of fine cattle is among the prominent means by which the present advanced state of British agriculture has been reached.* It is less than a century, hardly more than half that time, since the business of breeding for improved races has been intelligently entered upon, and yet I am told, and I suppose it to be true, that the average weight of the cattle now sold in the Smithfield market is more than double of those brought to the same place a hundred years ago. They are now better cared for; the cost per year of keeping is undoubtedly greater than formerly; but it should be considered that the time of growing them has been diminished; and it is therefore doubtful whether the whole expense of rearing and fattening them is much increased.

Were you to ask my opinion of the different breeds, I might be in difficulty. Not being remarkable for moral courage, at least, not wishing to invite antagonism, and being unwilling to throw a single obstacle in the way of any of my countrymen, who have invested money in the importation of fine breeds, I might fear to give an opinion. It could be of little use.

One thing, however, is certain. I say it with profound respect for English good judgment—Americans must judge for themselves. Their objects in keeping cattle are different, in one respect, at least, from those of the English; there, the working properties of oxen are an important consideration. English farmers hardly take that into account; because, they mistakenly, as I think, though they must be supposed to know their own business, reject the labor of the ox. They appear also to think less of the milking properties than we do.—With them, it seems to be beef, *beef*, BEEF—beef first, beef middle, beef last. The breed that will produce the greatest body, lay on fat most easily, and come earliest to maturity is hard to be competed with in their latitude, whatever may be the milking or working qualities; and it will be perceived that there are reasons for this here, which do not exist in America. The price of beef is higher here, as compared with those of butter and cheese, than in our country. One reason of this is, in the tastes of the people, or perhaps I might better say, in their opinions. They do not believe it healthy to flood their food with butter; nor, if eaten cold, to lay it in in junks. I doubt whether the thirty millions of people here consume more than half as much butter as the twenty-five millions there. Fat meat is more to their taste. Give an Englishman fat beef, bacon and ham, and he will toast the Queen and say Old England for ever. An American demands more bread, more cakes, more pastry, and a great deal more butter and cheese. There is another reason why meats are retailing higher here; butter, cheese and eggs can readily be, and are to a great extent, imported, while the speed of steam is not quite equal to the importation of fresh meats.

Climate, also, has much to do with this question.—The best breed for England might not be the best breed for America, were all other things equal. There are not wanting here men, who insist upon cattle already acclimated to their own region, while they admit that other breeds are decidedly better for other counties; and yet the difference of climate between the but-end of England and the tip end of Scotland is almost nothing compared with that between this whole country and ours. The former is never hot, never cold, always humid; the latter is now scorching, then stinging, often changing from one to the other, but generally dry and stimulant. The difference is not that we have less rain—we have more. But with us, when it rains, it rains, and *gets done* some time or other, and the air becomes dry and exhilirating, so pure that you can see objects distinctly fifty miles, whereas here you can seldom see them five. These peculiarities essentially affect all animal life, from man down to the insect that troubles his tillage. I am now going to express two opinions, and I do it with the utmost positiveness, *knowing* as well as I *can* know any thing, that I am right, though Americans will dispute me outright on the one, and Englishmen will laugh at my taste on the other. The first is, that we, in America, can *never* rear nor propagate cattle, with all that watery, bloated, but to the eye most admirable size and plumpness, that absolute perfection of form, seen here. That we have fine cattle, I know. That we can have better, I have no doubt. My best wishes are with the importers of any and every fine breed. I believe that good will come of it to the country; and may the men who are doing well for their country, do well for themselves; such is my earnest desire for them; and if others, instead of giving over their best native calves to the butcher, will breed from them, I believe that between the two classes of effort we shall not fail of obtaining the best stock for our climate, that both classes of breeders will deserve well for their country; and if not recklessly imprudent, will find a reasonable compensation. The other opinion is, that Englishmen, with their feed, fine as are their cattle in the fat, *beautiful*, plump, *perfect*, absolutely faultless form, can never make as good beef as we on Indian corn. Their joints on the table, done up every where in exquisite good taste, look as well as ours, and I think better. But then the *flavor*—it is wanting. If you want *to see* good beef, come to London; if you want to *eat* better, go to Boston, Albany, New-York—any where on that side. I hope I am not specially an epicure, but as often as I think of the Connecticut valley stall-fed oxen, the cows of no great pretensions on our hills, or the two and three year olds even, that roam in our dry pastures, I long for home.

The mutton of this country is as much more delicately flavored than ours, as the beef is inferior. I know not what the reason is, but the fact is unquestionable, and I do not wonder that the English people love mutton, and consume immense quantities of it.

While I have been writing the foregoing, in a room too public for consecutive thought, a gentleman from Wilts has said to me, that he has a farm in that county on which is a pasture of 260 acres, and of excellent quality, which has been managed nearly uniformly for more than half a century, the last 25 years by himself. He keeps on that pasture 60 large and nearly thoroughbred milch cows, of the Durham breed; 10 two years old heifers, 12 yearling heifers, and 10 cows that have become 7 or 8 years old, and are to be turned off each year as beef, making 92 in all. The calves are kept the first year in another lot, and are disposed of variously, except that 12 are selected each spring for the dairy, and are put with the cows in the great pasture. Thus the number of cows actually in milk is kept at 60, 12 yearlings being added as often as 10 cows are taken out, to guard against loss by disease or accident. He tells me that the annual produce of the pasture is 22,400 lbs. of cheese, 4,000 lbs. butter, 14,000 lbs. of beef, and refuse valued in pigs, about £80, besides from 40 to 50 calves, over and above the 12 necessary to keep the number of the herd good. He says that if he kept cows for milk only, he would have Alderneys by all means; that they give more butter and cheese in proportion to their keep, but as he turns off 10 a year for beef, the Durhams give him 1400 lbs. each, whereas the bodies of the Alderneys are little better than those of goats. He says farther, that his brother, who farms in a similar way, had, sixteen years ago, only Herefords, but that he has now exchanged them for nearly full blood Durhams, and is much pleased with the change. He also says that these large Durhams give very little milk in proportion to their keep; but it is remarkably rich, almost cream, and he is convinced that for him, at least, they are more profitable than any others. Whether his testimony is correct, is more than I can say. His appearance is that of a man of intelligence and candor, of one who knows what he is about. I should think that the general opinion here is inclining favorably to the Durhams, for the central and southern counties of England. What are best for America, must be an American question, and it must, as I have before stated, be settled with reference to points, which are not here taken into the account.

Possibly, a brief account of a visit recently made by me to one of the best herds in England, might not weary your readers. Through the kindness of B. P. Johnson, Esq., secretary of your state society, I was furnished with an introduction to H. Strafford, Esq. Through my own fault, not his, I did not see him till last week. Among other acts of kindness, which I shall ever remember, Mr. Strafford brought me acquainted with Mr. J. S. Tanqueray, of Hendon, Middlesex, seven miles from London, the owner of the herd just alluded to, as among the best in this country. I saw Mr. T. at his place of business, in this city, where he kindly invited me to take a seat in his carriage, and visit his place out of town. In company with Mr. Strafford and Mr. Toxford, principal editor, and I believe, proprietor of the Mark-Lane Express; Mr. Tanqueray accompanied us, and a most pleasant and agreeable trip I assure you it was. Mr. Tanqueray is the farmer of three or four hundred acres; has a beautiful country residence; possesses, I believe, a large property, made by his own energy, and certainly has a heart to enjoy it. His herd is of the short-horns vs. Durhams, containing upwards of one hundred animals. Among the first lot shown us, were the recent purchases from the celebrated Tortworth sale, of the late Earl Ducie's stock, of which accounts have been published by yourself and others. In this lot was the far-famed cow, Duchess 55, bred by the late Mr. Bates, of Kirkleavington, three of whose calves have lately been sold for the astonishing sum of 2,300 guineas; Grand Duke, to Mr. Thorne, of New-York, for 1,000 guineas; Duchess 64, to the same gentleman, for 600 guineas; also, the daughter of this cow, Duchess 66, to Col. Morris, President of the New-York state society, and Mr. Becar, of New-York. This beautiful heifer is now at Hendon, under the care of Mr. Tanqueray. These gentlemen also joined Mr. Tanqueray in the purchase of a bull at the sale of Earl Ducie's stock, called the Duke of Gloucester, for 650 guineas; and rather than lose him, they were prepared to give higher for him than ever was given for an animal of this character. He is the son of the bull mentioned above, and promises to fully sustain the character of the herd, tracing his genealogy direct from the Colling's stock, through Mr. Bates's and Earl Ducie's breeding. It will be observed that at the Tortworth sale, three of his calves sold each for 300 guineas or more, one of them a calf, at the time, of only a few weeks old, realizing 310 guineas. This last was from the heifer of Messrs. Morris and Becar, which, at the time of the sale, was under three years old, so that the heifer, at this early age, and her calf, but a few weeks old, brought upwards of 1,000 guineas. Mr. Tanqueray also purchased Duchess 69, from the same cow as the

Duke of Gloucester, calved in March last, for which he paid 400 guineas. This is a splendid specimen of the Durham. We may form some idea of the spirit and enterprise of this gentleman, from the fact that his purchases at the Tortworth sale alone exceeded 2,000 guineas. From his herd have been exported of late into the United States, several fine specimens. These have gone to Col. Morris, Mr. Becar and Mr. Thorne, of New-York; Mr. Alexander and other gentlemen in Kentucky and Ohio; Messrs. Kelly and Remmington, of Philadelphia; and to Mr. Levi A. Dowly, of Boston. Besides these of the Duchess family of short-horns, there were several other fine animals of the Oxford tribe, Lady Barrington and others, combining more or less the breed of the late Mr. Bates, Mr. Tanqueray having the last few years used no less than five bulls from that celebrated stock, and among them Balco, now owned by Messrs. Morris and Becar, lately on the show ground at Saratoga, though not entered for competition. This bull left some very promising stock at Hendon; and by the Fifth Duke of York (also a Kirkleavington bull), are to be seen some of the finest calves, such as any breeder might wish to possess. For some of these Mr. T. has been offered tempting prices. He likewise possesses several animals of another favorite sort of cattle, descended from the Nell Gwinne, or Princes tribe, and with such materials, or combinations of the most celebrated blood, it may be supposed that he will take a high position as a breeder of neat cattle The stock appeared in good breeding condition, but not liable, as has been seen in some quarters, to the charge of excessive obesity. I may speak in another place of Mr. Tanqueray's general farming, as worthy of imitation, and explain wherein he excels. At present, I have only space to say, that in the neat and picturesque appearance he has given to his lands, and in the arrangements, perfect neatness and beautiful *economy* of his farm buildings, he deserves high praise. His animals, down to the pigs, of which there were many, breath sweet air; and the veritable ladies whose titles his animals bear, might visit these premises without boots, and without carrying off any thing to remind them where they had been, although the nature of the soil and the position of the stalls and yards are such that in the hands of some farmers, they would be intolerably filthy. From these buildings nothing of a fertilizing nature is lost, which is more than can be said of many barns that have fallen under my observation.

I will add, that although the improvement of neat cattle may have reached its maximum, so far as respects select animals, and although its diffusion has been going on till it has doubled the average weight of animals in the English markets, and shortened the time of rearing them, yet this diffusion is now advancing more rapidly than ever. Respectfully yours, J. A. Nash.

Agriculture.—Agriculture is the primeval, and the most noble employment of mankind. Without a knowledge of the principles of the science of this art, man would become an uncivilised barbarian, subsisting like the brute creation on a scanty supply of fruits and roots.

Varieties and Culture of the Basket Willow.

"The willow manufacture, in the city of New-York, is already immense, and destined constantly to increase. The amount of imported willow ware is annually more than three millions of dollars! while the quantity of unmanufactured willow imported amounts to a much larger sum. And this amount of imported ware must also increase largely, unless the manufacture of the ware, and the cultivation of the willow, should be prosecuted extensively in the United States, in pursuit of that national independence which is desirable in peace, and indispensable in war.

The late John Reed, of Staten Island, amassed a little fortune by cultivating less than three acres of apparently worthless swamp, in rearing the Osier willow. Others have failed in the attempt, through ignorance of the proper species for this region of the earth, and the proper mode of cultivation. Some persons have settled down in the conviction that, perhaps Englishmen, Germans and Frenchmen may succeed in this branch of agriculture, but that a Yankee must necessarily fail.

Dr. C. W. Grant, of Newburgh, about five years ago, came to the conclusion that, among his varied objects of enterprise, he would include the cultivation of the willow, for which purpose he purchased a marsh in the Hudson, not far below West Point, connected with an extensive upland farm, which marshy ground he supposed would make a good Osier field. On trial, it was found that only a small portion of the ground was adapted for that purpose. Partial failure served only to stimulate him to fresh exertions, and the loss of some capital was followed by the resolve to recover it. He therefore engaged in extensive investigation of the whole subject, and availed himself of all attainable knowledge respecting the culture of the Osier in England, Scotland, Continental Europe and America. Nearly one hundred kinds of willow were imported, and experiments were carefully instituted on different soils, with very satisfactory results. Willow of his production was tested last fall, by different basket manufacturers, and found equal in quality to the very best European Osier, and far superior to the largest portion of that which is imported. In the course of Dr. Grant's investigations, a new species was found in the county of Suffolk, England, which proves to be a great acquisition not only in the arts, but as an ornamental tree.

To those who have undertaken, or are about to undertake, the cultivation of willow, it will undoubtedly prove very largely remunerative, if conducted with the requisite care and knowledge. Nature never yields choice favors to ignorance or negligence. No crop will better pay for proper tillage and proper soil—even yielding a profitable return *the first year*. But in the hands of unskillfulness and neglect it will of course prove an entire failure. In Rockland county, a small field of it was planted in the spring, and in the autumn of the same year yielded shoots of the finest quality, averaging at least six feet in length, and some of the tallest more than ten feet. The gross worth of the crop could not be less than $150 per acre. Here nothing remarkable was done, but (with a slight exception) every thing was well done. The soil was pretty rich, clayey alluvial, and deeply worked, the subsoil plow running to the depth of eighteen or twenty inches (two feet would have been better). A very little stable manure and a few bushels of ashes were used as a top dressing. The manure should have been worked in with very light furrow, or with the cultivator, but a heavy rain made it impracticable at the most advantageous season, and in a great measure compensated for the neglect. A small portion of it retained standing water until the middle of June. Some of the cuttings did not, in this wet place, strike at all, and others made little growth. A blind drain was then made through it, when the plants began immediately to thrive, and made a pretty good growth, but not equaling the others by about one-half. The cuttings were of very vigorous one year old wood, a few of them retaining some of the former year's wood. Unless the cuttings have to the heart a high degree of vital energy, the life of the center fails, and the plant becomes rotten at the heart, and although it does not soon die, it gives but imperfect shoots; whereas the one that is full of vital energy makes a plant in every respect as good as a seedling.

How shall a person proceed that wishes to plant willow? A little dabbling in it will afford small pleasure and no profit. Take the business at the point at which the best cultivators now have it—acquaint yourself with their doings and opinions concerning it. The time, money and thought required to experiment, are not trifling; and even if you are willing to lavish the time and means, unless you possess the patience and skill of a thoroughly trained cultivator, the experiment will be conducted to no satisfactory result.

Willow growing is destined to become a business of importance, or rather, is now becoming so; and those who early engage in it judiciously, will receive the brightest reward. I have just learned that Dr. Grant is so well pleased with it, that he is preparing to plant another field of twenty acres next season. That would generally be thought too much for a new beginner, and in most cases rightly so; but one-tenth of that quantity would be little enough for a beginning, and would be too little, unless you have, of suitable land (or mean to have) enough to extend it considerably. Those who make a large business of it will get the best per centage. I am making my article so long, that I cannot explain now, but will hereafter, if you wish.

A few words on the soil suitable for willow. It cannot be profitably grown in a *swamp;* but a swamp thoroughly drained and cultivated, is no longer a swamp. On such, willow will grow most luxuriantly; and so will red clover, but the upheaval of winter frost will throw out the clover and kill it, but will not injure the willow. It must, for its roots, have at least a foot of soil, that is not constantly sodden with water—and far better if you get two feet. Then the vigor will be astonishing to those who have not seen it; and to get shoots averaging 8 feet is easily practicable, *and is quite profitable.* I will relate a case that came under my own observation. A field that had been cultivated the previous year (on a portion of it, although the season was very dry, the crop had been lost by too much wetness,) was plowed, trench-plowed and subsoiled; that is, one plow followed another in the same furrow, besides the subsoil plow, making three. It was commenced early, and found to be very muddy work, and half of it left until after corn-planting, bringing it to the last of May, and some of it was not planted until the early part of June. The cuttings had been provided in the winter, and deeply covered with litter in a cool place, but before the last of planting some of them had thrown out shoots of considerable length. Drouth of unexampled severity followed (1852). Apprehension was entertained of entire failure, yet where the ground was deeply worked, no failure occurred; but a little not deeply worked was an entire failure. The deep working so obviated the wetness that the past wet season caused but little injury. The early planted are still somewhat the best, but on any part the crop is quite satisfactory.

Dr. Grant has prepared a treatise respecting its management and preparation for market, for the benefit of others, which he will publish as soon as he finds himself fortified by experiments, sufficiently protracted and extensive to enable him to speak with full certainty on all important points. He is able to supply cuttings, but only in limited quantities of the rarer kinds. He is willing to impart information to all interested parties." Staten Islander. *Richmond Co., N. Y.*

Brush and Tile Draining.

I read with interest an article from your paper, on the subject of under-draining, wherein you recommend the use of brush under certain circumstances. I am preparing to drain some wet prairie, which is of a loose muck in most places, and several feet in depth. As being the most durable, I would prefer to use tile, but the article is not made here, and could not be procured nearer than Buffalo, and I presume it would not pay to bring them from there. I have, however, an abundance of brush, and timber in all its forms. How large should the brush be? It has occurred to me that I could make a good drain with poles. What is the weight per thousand of 2 inch. draining tiles? By answering these inquiries, as it may suit your convenience, you will confer a favor on—A. A. Cole, *Peru, Ind., Nov.*12, 1853.

For soft or mucky ground, and where the drains are deep, it would be best to deposit first, a small layer of fine brush on the bottom of the ditch, then lay in the middle the poles or larger branches, and lastly, a layer of brush cut from three to five feet long, the buts downwards and down the hill. By this means, the poles are completely encased in fine brush, and their larger interstices prevented from becoming filled and choked by the soft material in which the ditch is dug. Where considerable water is expected to flow off; and more especially where the descent is trifling, it is quite necessary that some large channels of this sort be provided. Where, however, the water is in small quantity, it may be sufficient to fill with brush in the ordinary way, or by placing the buts downwards, and pointing down the slope. We have found our own brush drains to last many years, decay being, in a great measure, prevented by exclusion from the air.

We have just had a quantity of two inch sole tile weighed, such as is manufactured at Palmyra, N. Y., and which is nearly half an inch thick, and find it to average a little less than two pounds to the foot, and consequently a ton would lay about 1100 feet.

Stabling and Feeding Cows in Winter.

Can you inform me through the columns of the Country Gentleman how I can prevent my cows from lying in their manure when in the stable? I have tried every way that I can think of, but all to no purpose—for every morning their udders are so filthy that it would take five or ten minutes and one gallon of water to wash them clean. My stable floor is good, slopes back three inches in ten feet. I clean it out every day and cover over with clean straw. Unless I can find some remedy I shall have to abandon stabling altogether.

Should cows be fed before or after milking, or does it make any difference in product of milk or butter?

Ought cows to be subjected to long stripping, or not? I have a heifer with her first calf, that is disposed to strip a long time, and I do not wish to spend the time unless the product of milk is increased thereby.

Also, which is the best straw and hay cutter for general use with which you are acquainted; what is the price, and where can it be obtained? Or will it pay at all to cut feed for two or three cows, when you have plenty of work to occupy your whole time, at 75 cents per day, and can purchase hay at seven or eight dollars per ton?

Please give me all the information you can on the above subjects, which will be thankfully received by A Subscriber. *Connellsville, Pa.*

To keep cows clean during the period of their stabling, we have found it absolutely necessary to clean the stables at least twice a day, and more especially in the evening just before spreading their beds of straw for the night. They should also have room enough to select a clean place to lie in, and be tied so as to lie down and rise again without the least inconvenience. With these precautions, we have no difficulty in keeping them clean.

The udder of some cows is more easily drained than of others. Where necessary for completely emptying the udder, long-stripping must not be neglected. Cows which are not milked clean, diminish in quantity, and soon "dry up." The process of stripping may possibly be continued so long as to be a waste of time, but we have never known an occurrence of this sort, for not one milker in twenty does the work thoroughly enough, especially towards the close of the year, when the supplies are given down more slowly.

A cheap and perfect straw-cutter has not yet been made. Those manufactured by Emery, Ruggles, and others, consist of a cylinder of knives cutting on a roller of green hide, and cut with great ease and rapidity, and do not easily get out of order. They have but one serious defect—they will not cut shorter than an inch, which will do tolerably well for hay and straw, but not for corn-stalks. The price is six or seven dollars, and upwards. The cheaper ones do not cut so fast nor so short as those of higher price and more numerously furnished with knives. Sanford's straw-cutter, sold, if we mistake not, by Rapalje & Co., of Rochester, costs about 12 dollars, and consists of two cylinders of knives working into each other like the teeth of two cogwheels. It answers well for corn-stalks, crushing and cutting at one operation, but from some cause unknown to us, does not appear to have been extensively used. For cutting very short, we have not yet found a machine that is at once reasonably cheap, efficient, and durable for long use

Cutting fodder has several advantages. Straw and hay may be intermixed and both eaten together, and mastication rendered more complete and perfect; corn stalks, *if cut finely enough*, will be more thoroughly eaten, and the manure will be fine, instead of course, long, and unfit to apply till thoroughly rotted. We have no accurate experiments to show the precise amount saved by cutting;—an acquaintance informs us he finds the yearly saving in keeping a single horse, to be twenty dollars, out of fifty, formerly required; but we think his estimate too high. The public very much needs more accurate experiments on this subject.

The Reapers and National Prejudice.

It is very natural for a man to like his own performance better than that of others; to think his own home best, and to regard his own nation as the most wonderful in existence. A decent share of this feeling is a good thing, for it makes one satisfied with his situation, and prevents complaint; but when carried to excess, so as to lead to inordinate and empty boasting, like that of too many Yankees, or to one-sided illiberality, like that of too many British, it becomes disagreeable and disgusting. The best way to improve is to keep our own eyes wide open to our own faults and deficiences, and ready at all times to learn from the superiority of others. The London Times and its co-thinkers ridiculed at first the American productions at the London Crystal Palace, but afterwards had the magnanimity to acknowledge their mistake—which acknowledgment the Americans received with such eager boasting and retaliatory taunts as eclipsed all the honor of their victory. We believe very few American editors would have shown as much magnanimity as the London Times.

For the reasons above stated, we make it a rule to abstain from finding any fault with our trans-atlantic cousins, except to correct glaring errors. One of these glaring errors has lately occured in their attempt to claim all the credit of the invention of reaping machines. They have lately ascertained that an individual somewhere in Scotland, went to America many years ago, and took a *model* of a reaping machine, invented by Bell; from this, it is inferred that, as a matter of course, the American inventors obtained their first ideas of reaping machines, and that they only *copied* and put in operation this Scotch invention. Now the question naturally arises, How many of the American people would be likely to see a model, packed away in a man's trunk, and never used in practice? It was not many years ago that an English nurseryman sent an ordered box of plants to a resident of western New-York, directed to be sent "by the *first wagon* from New-York city"—a distance of some 3 or 400 miles!! Not even so intelligent as this, is the supposition that the American nation consisted of a few individuals who assembled on the sea-shore and saw the Scotchman land with his model—instead of the fact, that many millions were scattered over a territory a thousand miles in extent, and that a hundred-thousandth part of this immense multitude would not be likely ever to get a glimpse of the model.

But suppose they had all seen it, and had afterwards succeeded in putting reaping machines into successful operation; to whom is the most credit to be awarded,—to those who merely propose; or to those who conquer the innumerable difficulties of successful introduction? The Marquis of Worcester proposed the steam-engine, but the credit is awarded to Newcomen and Watt, who reduced the thing to practice. Steamboats were not only proposed but actually made, long before Fulton rendered them practically useful; yet no one thinks of giving the credit to any man but Fulton. Cast-plows were long ago proposed and made; but to Wood belongs the entire credit of such a form as to bring them into successful use. While Fulton's experiment was yet doubtful, the odium of a visionary attempt, as it was thought, was cast upon him from all quarters, and all were willing to allow him the exclusive claim; when he triumphed, "*others* had thought of the same thing before." While Wood was contending with extraordinary difficulties, all were willing to accord to him the reproach of attempting the construction of plows of "brittle and worthless *pot-metal*;" when success crowned his efforts, then there were plenty of claimants for the honor. So with the reaper; when it stood in an obscure corner of the Glass Palace, an object of ridicule, the Yankees were allowed the entire merit of the invention; when it was afterwards sold by hundreds through Britain,—then, Bell the Scotchman invented it!

Now, what are the real merits of this same machine of Bell's, as compared with the American reapers? Bell's is admitted by the English writers to be as heavy of draught, from its own weight, as a cart heavily loaded with stones, and so far as cutting is concerned, is very much the same as Rugg's Propeller, which failed entirely at the Geneva trial; it had not, so far as we can learn, ever been used by half a dozen farmers, until Hussey's and McCormick's opened the way for its wider trial. At the same time, thousands of the American reapers had been used for years in this country, and proved eminently useful. The one, had never passed the boundary of a single farm; the others were known throughout half the Union. Under these circumstances, which was really the machine for practical use? And who deserves the credit of reducing the reaping machine, known in some shape or other even as far back as the days of Pliny, to a form for general utility?

In making these remarks, we disclaim any wish other than to place the matter in its true light, without regard to national boundaries; and still more do we disclaim any approval of the acrimonious and discreditable controversies in which some of our countrymen have taken part in the British agricultural journals.

Importation of Horses into New Brunswick.

We stated sometime last summer, that the Province of New-Brunswick had made an appropriation to the several district Agricultural Societies, on condition that they raised an equal amount by subscription, for the purpose of importing such horses as should be deemed best calculated to improve the breeds of the Province. The funds having been raised, our correspondent, Dr. W. A. CUMING, veterinary surgeon, of St. John, was sent out to Great Britain to make the selection and purchases. Mr. C. purchased eight very valuable horses, and arrived at St. John, on his return, on the 18th of October, in the Eudocia, from Liverpool, with five of the animals, three having perished in a hurricane, which was encountered when the vessel was eight days out. Those received, however, showed no signs of hard usage; and they are, says a St. John paper, certainly noble specimens of the different breeds, and do much credit to Mr. CUMING's skill and judgment.

Destroying Brakes or Ferns.

Being a constant reader of the *Country Gentleman*, and having an ardent desire to gain information, I would inquire through your columns, the best method of killing brakes on stony and rocky lands which cannot be plowed or cultivated. D. C. L. *Essex, Vt.*

We have no practical experience in this matter, and could recommend nothing better than to grub them up by hand, which would be next to impossible where they are very abundant. We question if there is any "royal road" to their destruction; but our correspondents who have more practical knowledge, can perhaps furnish something valuable.

Smut in Wheat.

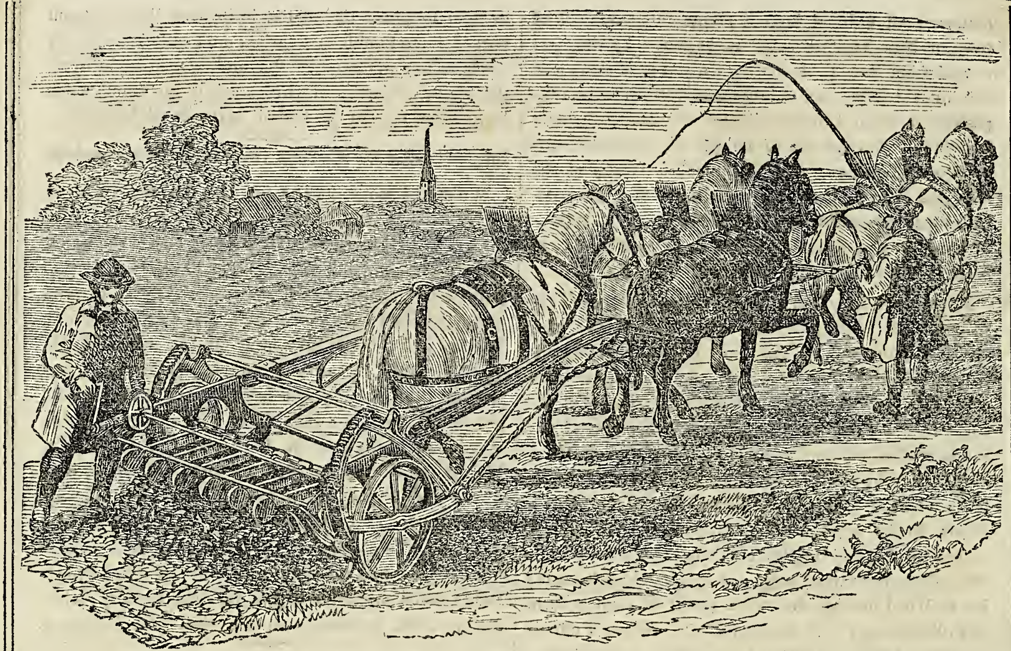
MESSRS. EDITORS—Please inform me as to the supposed cause of smut in wheat, and a preventive or remedy.—G. *Marion Co., O. T., Sept.* 1853.

Smut in wheat is a fungus or cryptogamous plant like the mushroom, which grows in the grain and consumes it. It may be very easily and effectually prevented by washing the seed well, then washing it in brine, and finally rolling it in powdered or air-slacked lime. Even washing, alone, if thoroughly done, will nearly remove the smut.

South Down Sheep.

Can you or some of your numerous subscribers inform me, through the pages of the Cultivator, where I can get the full blooded South Down sheep, and what they will cost a pair?—S. D. *Jefferson co., Ind.*

South Down sheep can be procured of L. G. MORRIS, Fordham, Westchester county, N. Y.; Col. J. M. SHERWOOD, Auburn, N. Y.; Z. B. WAKEMAN, Little Falls, N. Y.; and several other breeders in this state. The prices vary from $20 to $100 or more per pair, according to quality.



Samuelson's Rotary Digger.

In a recent number we copied the remarks of the Mark Lane Express upon the practical working of Samuelson's Digging Machine. We present a superior cut of the machine, which will show more clearly than any description its operation. It is the invention of Mr. B. Samuelson, of Banbury, England, and consists of a simple frame running on two wheels, which, in their revolution, cause a series of forks or prongs to loosen and pulverize the earth to a depth of eight or ten inches, and over a width of three feet. Five or six horses, according to the state of the soil, attended by two men, are able to work over five or six acres a day. As the prongs come round they bring up the soil and let it fall backward in a well pulverized and mixed state, and to keep them free from earth, each circle of prongs works between a corresponding set of stationary clearing teeth on the frame. We are informed that at a trial near Banbury, on a "friable calcareous loam, pretty stony, and fallow, after an autumnal plowing, and with here and there some couch grass upon it, after the passage of the machine, the pedestrian sank in the soil, as he walked, two or three inches; and on testing it with a walking stick, it showed a looseness down to eight or nine inches." It has been extensively introduced into Scotland, and the Royal Agricultural Society of England awarded it a silver medal after a thorough trial at Gloucester. The perspective sketch, represents the Digger at work in the field. The depth of entrance of the prongs is adjusted by a handle, geared to a pinion, working in a segmental tooth-rack on the frame-work. It will be readily apparent that this machine will pulverize the soil more effectually than the plow and the harrow. The only objection to it is the great amount of power necessary to operate it, but this may be obviated by reducing the width of the machine or simplifying the machinery. It will undoubtedly be many years before an implement of this sort will supercede the time-honored plow; but the principle of digging the soil and reducing it to a finer tilth than it is possible for the plow to do, is fully established. The more thoroughly the soil can be stirred, mixed and pulverized, the greater will be its productiveness.

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Plaster for Wheat.

Could you or any of your numerous subscribers inform me through The Cultivator, whether plaster sown on winter grain in the fall would be beneficial or not; if so, how much would be required to the acre? A. D.

We know of but few experiments in the application of this manure for wheat, and none of these were successful enough to warrant its use. We believe this has been the usual result everywhere. Early spring would doubtless be the best time, should our correspondent wish to try the experiment. Its beneficial effects may be communicated to wheat in a much more effectual way, namely, by applying the plaster to clover, and then turning under the clover as a manuring for the following wheat crop. About one bushel per acre commonly produces as beneficial a result as a larger quantity, and the best time is in the spring, just as the young plants are beginning to throw out their first spring leaves.

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Wheat Crop in Western New-York.—Dr. Lee says that the single county of Monroe, N. Y., annually produces one-third more wheat than Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, put together.

Wintering Domestic Animals.

Most important annual era is now commencing with the farmers of the whole country. They are beginning a period of nearly half a year, when all their domestic animals must be fed chiefly on dried or artificial food, and when cold, storms, wind, and snow and rain, are all operating to weaken or waste the flesh of their farm stock, unless a good system of protection and precaution is adopted at the outset.

The vastness and importance of this branch of successful husbandry, is almost beyond comprehension. The census returns inform us that 600 millions of dollars are invested in the live stock of the Union; yet this does not furnish a full index to their value, which is intimately blended with the manufacture of manure, the main-spring in the production of all crops—and on them depend the forces, the general economy, and not only their direct profits in the sale of butter, cheese, wool, beef, pork, lard and tallow, and living animals, but indirectly the profits of all kinds of grain and root-growing, with which the animals are as intimately connected as the woof and the warp of the weaver's fabric.

The losses from the bad wintering of farm stock are enormous. Estimating that one-half of their value is required to carry them through the average four months of winter, (which in the extreme north is nearly six months,) we have three hundred millions of dollars to be expended upon them the country over, between the present time and the period of spring pasture. Would it not be safe to say one-third, or one hundred millions,—enough to make a Pacific railway,—are annually lost, literally sunk,—by bad management? Let us look a little at this part of the subject.

We have shown on former occasions why animals must consume food to sustain their warmth in cold weather, as well as for the support of their flesh. A man who rides in an open cutter in the cold all the day, although nearly destitute of exercise, will find it necessary to eat nearly twice as much as when taking as much exercise in a warm stove-room; and every farm laborer has found that he eats more in chopping cord-wood in the wintry forest, than in cradling wheat under a burning sun. It is the same with animals; when exposed to wind and storms, a large portion of the food they consume, must of necessity go to keep up the heat; and the farmer must either give them *additional* food, or see them decline in flesh—for the warmth is a part of vitality, and must be kept up, flesh or no flesh, while the animal lives.

Careful observers who have provided ample and comfortable shelter, think that one-third of the food of cattle is saved by such protection, the condition as to flesh remaining the same as when subjected to exposure. When they are suffered to lie on wet straw, or on damp ground with no straw at all, the cold affects their wet bodies still more. Milch cows give more and better milk, when well cared for, and horses are stronger and more lively for work. Sheep furnish finer wool and more of it, fewer perish by winter, and all come out in better condition in spring, when protected from the blasts of the wintry tempests; a skilful sheep raiser thinks his sheep-barns and sheds were thus paid for in two winters. The wintering of store pigs would be a far less expensive item of farm economy, if warm, comfortable and *clean* quarters were always assigned them.

In addition to the immediate and present loss from exposure, there is another formidable loss, of a more remote but not less real character. This is the check or stunting in growth which young animals receive, and which they never get over. Let two be fed and treated precisely alike, at all periods of their growth, with the exception of exposing one to snow, rain, mud, and discomfort for a single winter, while the other has warm dry quarters and good regular food; and that winter will be impressed upon them, as an indelible historical mark, in their relative sizes, for the rest of their lives. To say nothing about the loss of fodder by treading in mud, feeding irregularly or in over and under doses, and out of time, and other wasteful practices, we are satisfied that the above-mentioned causes occasion a waste of at least one-third of the wintering, and that the hundred-million estimate is not extravagant.

Why will farmers continue longer to pursue this costly, slip-shod treatment? Why not lay down for themselves a set of rules, something like the following, and show that they have industry and energy to practice them with rigid exactness:

1. To shelter all fodder well, that the weather may not waste its strength.

2. To shelter well the straw for litter, that it may be always dry and comfortable.

3. To feed regularly, both as to time and quantity, that the animals may never fret for delayed meals, or from stinted supplies.

4. To give every night a good bed of dry litter, that animals may not become chilly from dampness.

5. To keep their places of repose clean and their hides well curried, that they may not suffer the discomfort of filth.

6. To provide ample racks and feeding-boxes to prevent a waste of roots, meal, and fodder.

7. To give special attention to growing animals, that they may not become irrecoverably stunted.

Town Agricultural Societies.

Messrs. Editors—In your article on "Agricultural Fairs," in a recent number of the Country Gentleman, a few remarks were made upon the importance of Town Societies, which, in consequence of the lack of public appreciation, are particularly worthy of additional remark.

State and County Societies reveal to us the improved stock, the improved farm implements and farm products of an enlightened agriculture; but they do not bring practical intelligence to the understanding of each individual member. This is the peculiar province of the town society, and should be the end and aim of all such organizations.

Town Societies should, in our judgment, be formed with no reference to exhibitions; but rather for mutual improvement in the various departments of science and art, having reference to their peculiar vocation. A suitable library, to which all members shall have free access, is the first and all important desideratum in such township organizations. Of those devoted to agricultural pursuits, there is probably not one in a thousand so thoroughly posted in knowledge as to realize the greatest amount of profit at present attainable in the various departments of his labor. The means of information are not at hand, and thousands go plodding on, from year to year, without even the shadow of improvement.

A thorough knowledge of the best known system of rotation of crops, the best method of saving and applying manure, and the best method of preparing the soil for the reception of the seed, would, if practically put in requisition in every community, very considerably enhance agricultural products, which enhancement would, in the aggregate, amount to no inconsiderable number of dollars. An acquaintance with the best system of improving stock, of developing, to a full extent, their healthy growth, as well as the best methods of remedying their various diseases, would be equally prolific of results, in no small degree enhancing the profits of the grazier.

A knowledge of the present state of pomological science would very materially enhance the luxuries of home and the profits of the orchard. But few are aware of the disadvantages which ignorance of such knowledge entails. Many trees in transplanting, are unnecessarily lost, old orchards are not half so prolific as good culture would make them; and new selections are, too often, most injudiciously made. We have known whole orchards set with the Newtown pippin, in a soil nearly destitute of lime, and others to the blue pearmain; in either case the loss is at least ninety per cent of what might have been realized from a judicious selection, which an acquaintance with such works as J. J. Thomas's, Barry's, or Downing's would have enabled them to have made.

In the construction of buildings, useless expense is often incurred, even at the expense of convenience and beauty, which a fair knowledge of rural architecture would have prevented.

Kitchen gardening is lamentably neglected by professed agriculturists, not only through a mistaken notion of its unprofitableness, but through ignorance of the most successful means of culture, and the luxuries which such culture affords.

Facilties for such and other important information, a Town Agricultural Society can easily provide. At a trifling individual expense, such works as "Stephens's Book of the Farm," "Dana's Muck Manual," or "Browne's American Muck Book," "Johnson's Chemistry" and his "Practical Agriculture," "Allen's American Farm Book," Youatt or Allen on the "Diseases of Domestic Animals," Thomas on "Fruit and Fruit Trees," Allen or Downing on "Rural Architecture," "Buist's Kitchen Garden," "Nash's Progressive Farmer," "Falkner's Farmer's Manual," and many other equally important agricultural works may be placed within the reach of each member. Such an investment would pay in beneficial, practical results an hundred fold.

In addition to providing the means of information, Town societies may accomplish much by giving each member something to do in experimental research. Much additional information may thus be elicited, at least of local if not of general interest, adding to the rapidly increasing stock of agricultural knowledge.—Yours, &c., O. C. Gibbs, M. D. *Perry, Lake Co., Ohio.*

Agricultural Machinery.

The last number of the Journal of the N. Y. State Agricultural Society contains the interesting and valuable Report of John Stanton Gould, Chairman of the Committee on Agricultural Machinery. Among other contrivances noticed, is an account of the portable *Cider Mill*, exhibited by John Jones, of Little Falls, Herkimer county, N. Y. What appears to us the most remarkable, is the great number of useful purposes to which this machine may be applied. It will grind apples into pomace, mash potatoes, turneps and carrots, grind meat for sausages, and pulverize sugar. The press may be applied to pressing tallow, lard, currants for wine or jelly, and to wringing clothes. There are two sizes, one for a horse, and the other to be worked by hand. The hand mill may be moved from place to place as easily as a common wheel-barrow. The exhibitor ground with one of these machines four barrels of pomace in eight minutes, in presence of the committee, "without any great effort," the pomace being much finer than usual. One man may make five barrels of cider in a day. The committee remark, that by the aid of one of these machines, the farmer may keep himself in sweet cider the year round (fermented he should never drink); can make it at "odd times," save his wind-falls, or at any time any surplus of apples threatened with decay.—Price of the horse machine, $60; hand machine, $25.

An improvement is noticed in Fairbanks's *Hay Scales*; the usual notches on the beam are dispensed with; the poise sliding along smoothly, an index pointing downwards to the figures on the side of the beam, rendering the operation more expeditious and more accurate than where the poise must be *lifted* from notch to notch.

Root Washers—We have been long of the opinion that a good root washer, by separating rapidly the dirt from potatoes, when first dug (in connection with subsequent ventilation), would contribute more than any thing else to preserve harvested potatoes from the rot. We have hoped to see something offered for sale, like Croskill's Archimedean Root Washer, in England. The only thing of the kind mentioned by the committee is Bentley's Hydraulic Steamer and Washer, which is highly commended, but the mode of construction or operation is not described.

Drills—A contrivance is mentioned for dropping plaster, or other concentrated manure, over but not in contact with the seed, the drill closing over and partially covering the seed before the plaster tube deposits its contents. This may prove of advantage in applying guano or other highly fertilizing compounds, too strong for immediate contact with the seed. This drill was exhibited by C. A. Wakefield, of Elizabethtown, N. J., and has an opening in the back of the machine, enabling the operator to see at any moment whether the machine is dropping or not. Seymour & Co.'s latest improved drill is noticed, being the only machine that at one operation sows grass seed broadcast, drills in the grain, sows any pulverized manure, and is capable of being fitted as a horse hoe, like Garrett's. Price of the whole, $130.

Helderbergh Farming.

RENSSELAERVILLE, Dec. 7, 1853.

EDITORS COUNTRY GENTLEMAN—In the June No. of the Cultivator, you published some account of my method of manufacturing manure from spent tan-bark. I believe I promised, when leisure would permit, to give you some of the results. The season of the year has now arrived when the farmer is afforded some relaxation from "weary toil," and some of the long evenings cannot be better employed, perhaps, than by communicating such results, of expense and labor, as shall interest and perhaps instruct our fellow farmers in the great enterprise in which we are engaged.

I would not have you think this is book-farming. If I communicate facts and results, and others, by reading an account of my experiment in the columns of the Cultivator, are thereby induced to adopt some system of farming different from the "old routine," don't call that book-farming. This much I will now say, I have learned very much by conversing with my fellow farmers as to their method of management for different crops. I became, when I was a boy, not passionately, but enthusiastically fond of such pursuits, by reading books on English argiculture, especially some articles in the Edinburgh Encyclopædia. I have never been favored with an opportunity of satisfying my longing desires in such pursuits in any other district of our broad land, save on these Helderbergh hills. As forbidding as this region may seem to you and some of your readers, I think I shall be able to satisfy you and them too, before I get through, that this region is as valuable for farming purposes as any other inland district in the state, the Genesee valley not excepted.

I must hasten to give you some account of my system of husbandry. I would remark that the eighty acres I occupy (forty too much) were, until ten years since, one of those half-lots on which, for time out of mind, a system of skinning had been practiced, and which is still too much practiced, by most of the farmers in this vicinity. My object has not been to make money, but to put the land in such condition as that money might be made from it. The process is slow but cheering, as from year to year we witness the tall and taller grass, the deep and deeper green of the verdure, the heavy and heavier crops, and realize that this process can be witnessed ad infinitum by the addition of a sufficient quantity of manure. To supply a deficiency in this article, led me to adopt the use of spent tan-bark, as being the most convenient, after having exhausted the road sides for some considerable distance.

The first thing that struck me as indispensable was, to clear the land of stones. This was a huge undertaking, but large and small, they must be subdued.

All the little money we could raise from eggs and butter and poultry, &c., had to go to buy flour in the Albany market. (I should have remarked, that one principle I adopted was, the farm should pay its own expenses and support the family.) To expend every shilling of money to buy bread, was ruinous. I begin therefore with wheat. To succeed in this crop, I have adopted the following as a general system. First, sward land, to be plowed deep in the spring for corn, well harrowed with a short tooth drag, so as not to invert the sod—manure in the hill, plaster, ashes; anything that will produce a large growth is applied. A large growth is important I conceive in two respects, aside from the amount of crops. It fructifies the soil and prevents the growth of weeds, and also gives material for making manure. It is a given axiom that the more we can raise from a given quantity of land, the more stock we can keep on the same land, and thus increase our quantity of manure, and also increase our capacity to make the land produce more the next season. The corn harvested, the land is now prepared for another crop, both of which look towards wheat, as the grand point aimed at, in this rotation. The corn comes off too late, in these parts, to sow wheat immediately after it. I adopt marrowfat peas as the next rotation, for several reasons. First, they come off in August, early enough to prepare the ground for the wheat crop. Secondly, the land is well prepared for the growth of peas. Thirdly, they are ready by the time milk from the dairy begins to fail, to supply this deficiency in fattening early pigs. The crop of peas secured, the next thing is to prepare the ground farther for the wheat crop. There is now sufficient time to be thorough, and to make the time hold out, I take but a small bit of land, holding the doctrine in practice, that everybody preaches, "that two acres well tilled is better than four acres run over." This bit of land is first thoroughly cleared of stone, then plowed as deep as we can make the plow run, frequently employing a hand to stand on the end of the beam to put it down to the greatest depth possible. This operation requires a very stiff pair of oxen. To make it still more effectual, in the absence of a sub-soil plow, I take a long pointed plow with a set clevis and a horse team to plow what we call two "furrows in a row." I keep crowbars, shovels, chains and levers convenient, so that any stone that may be lurking near the reach of the plows, (and there are sometimes many of them,) may be hauled out to the top of the ground. Suppose now the ground plowed in the manner above described, the stone are then removed and the ground smoothed down with a harrow, and is then ready to receive the manure of a year old. You see that it will be fine and well rotted at this age. It is put on in heaps in regular rows, at the rate of about 25 or 30 loads to the acre. When all carted on in regular rows and even sized heaps, I feel a wonderful joy in contemplating it. But I must hasten or my letter will be too long, if not so already. The next thing in order is the seed, and I consider this of the first importance. Out of two or three bushels, I sift with a screen all that can be made to go through its meshes—cockle, chess, wild peas, sorrel, all the small grains of wheat, so that nothing is left but the large and plump berries of the wheat. (I have at present the red bald, but any kind does well with this management.) This wheat is then washed in a strong brine and rolled in lime in order to destroy the smut, if any, or plaster will do, to give it a start. The manure is then spread in rows. A cloudy day is preferred, and a two-horse cultivator, well loaded with stone, if not heavy enough, is passed over the land as fast as the manure is spread. This mixes it completely with the soil. The wheat is then sowed broadcast, at about two bushels to the acre, and harrowed in in the same way. This done, a wagon or cart is passed over the ground and every stone of any size, worthy the name, is taken off; the ground furrowed both ways, if level, at an interval of 18 or 20 feet; a heavy roller is then passed over the whole and the crop is in. In my next I will give you the rotation still farther, (this is the first crop several years back,) and show how I think 50 bushels to the acre can be realized without much expense, as we now have the land prepared and in a fit state for farming purposes. Very respectfully yours, G. W. Durant

Depth for Burying Manure.

Men are divided as to the proper depth of burying manure. Some hold that it sinks in the soil, is washed downward by the leaching rains, and should therefore be applied near or at the surface. Others assert that its volatile and most valuable parts rise by fermentation, and that consequently it should be buried deep. Now it usually happens when doctors disagree that both are partly right and partly wrong; but in the present instance, they are both a little in the right, and a great deal in the wrong.

Manure usually stays very nearly where it is put. If buried near the surface, it remains near the surface; if buried deep, *there* it remains; if plowed under in large lumps, it has but little power to rise, sink, or in any other way to intermix itself, and hence the reason that thorough pulverization or harrowing before manure is turned under gives a result in large crops.

The power which clay has to absorb the fertilizing portions of manure, is very great. Soils which possess a medium amount of clay, or loam, with a medium degree of tenacity, will absorb all that is valuable in ordinary yard manure, equal to nearly their own bulk. Forty loads of manure to the acre, form a heavy coating; yet this is only one load to four square rods, constituting a depth, when spread, of only one third of an inch. Consequently, when a coating of forty loads to the acre is plowed under, the volatile parts have only to pass one third of an inch or so, before they are all absorbed by the soil. Hence the error of supposing that they can possibly, in ordinary soils, rise or sink to any practicable depth. And hence also, the great importance of mixing manures very intimably through all parts of the soil, if plants are to get their full benefit, and not be over-fed at one part of their roots and starved at another.

There are many proofs of the correctness of the position here taken. We have made large piles of compost, consisting of one third rich stable manure, and two thirds of loam and turf, yet all the odor was completely retained, and not the slightest portion passing off could be perceived by the smell. We have buried large dead animals with a coating of only six inches of loam; not the faintest indication of the decomposition below ever reached the surface. On the other hand, the soil which forms the bottom of manure yards, is not found even within a few inches of the surface to be at all enriched by the piles of fertility which rest upon it.

The true rule for burying manure, is to place it just at such depth in the soil as the roots of the crop usually extend, which will vary with different plants. Some of the grasses, for instance, form a turf very near the surface, and hence an autumn top-dressing will soak in enough to benefit them essentially. Clover roots run deeper, and this crop is consequently but little benefited by top-dressings when of much size, except so far as they operate in keeping the surface moist. The roots of fruit trees are still deeper, and they derive but little advantage, except from manures well spaded or worked in. They however possess an important advantage over annuals and perennial rooted plants; by continuing in growth for successive years, those roots which happen to run into the region of fertility, soon throw out numerous fibres, and secure an amount of nourishment, of which annual plants, in consequence of their more limited powers of extension, are not able to avail themselves.

There are, however, not many crops which do not need the full depth afforded by ordinary plowing; and hence the best practice for nearly all kinds of culture, is to spread the manure well, harrow it most thoroughly, in order to break it as finely as possible, and at the same time to mix it intimately with the surface; then turn it under by ordinary plowing, and the lower half of the inverted earth will furnish a thoroughly enriched bed for the roots to penetrate. If a greater depth of fertility is needed than ordinary plowing affords, the coat of harrowed manure may be thrown under ten or twelve inches by means of a double mouldboard or Michigan plow; and then another coat of manure spread, harrowed, and plowed under by a light or gang-plow. The young plants of the crop are thrown rapidly forward by the upper stratum of manure, and at a later stage of growth, are equally stimulated by the lower stratum.

New-York State Ag. Society.

WINTER MEETING.

The annual meeting and Winter Exhibition of the New-York State Ag. Society, will be held in this city on the 7th, 8th and 9th days of February next. At this meeting a report is to be made by a committee, appointed at the last annual meeting, to consider the propriety of locating the State Fairs at two or three places, and the erection of permanent fixtures for the show. This and other matters will render the ensuing meeting one of unusual interest, and we cannot but hope that all sections of the state will be properly represented on the occasion.

The premiums to be awarded, are those on Farms, Experiments, Farm Crops, Samples of Grains and Seeds, Fat Stock, Dressed Meats and Dressed Poultry, Butter, Cheese, &c. We annex a list of the premiums on such articles as are to be exhibited:—

GRAINS AND SEEDS.

[*Five Bushels of each to be Exhibited.*]

Winter Wheat—1st prize, $8; 2d, $5; 3d, $3.

Spring Wheat—The same as above.

For *Rye*, 4-rowed and 2-rowed *Barley*, *Oats*, *Yellow* and *White Corn*, *Peas*, *Beans*, *Large* and *Small Clover Seed*, *Timothy Seed* and *Flax Seed*—three premiums of $5, $3 and $2 on each.

FAT STOCK.

Best fat ox, 4 years old and upwards,	$30
2d do	25
3d do	20
Best fat steer, 3 years old,	25
2d do	20
3d do	15
Best fat cow, 4 years and upwards,	20
2d do	15
3d do	10
Best fat heifer, 3 years old,	15
2d do	10
3d do	5
Best spayed heifer, 3 years old,	15
2d do	10
3d do	5
Three best long-wooled sheep, 2 years and upwards,	10
2d do	8
3d do	5
Three best long-wooled sheep under 2 years,	8
2d do	5
3d do	3
Three best middle-wooled, 2 years old and upwards,	10
2d do	8
3d do	5
Three best middle-wooled sheep under 2 years,	8
2d do	5
3d do	3
Three best cross breed sheep, 2 years and upwards,	10
2d do	8
3d do	5
Three best cross-breed sheep, under 2 years,	8
2d do	5
3d do	3

Persons competing for premiums on Live Stock must give a full and detailed statement of the time and manner of feeding the animal; the materials of food consumed, in quality, quantity and value; the breed of the animal, if known; the weight, if practicable, when the feeding was commenced, and the weight at the time of the exhibition, must be given, and all to be verified by affidavit; and unless these statements are furnished, premiums will not be awarded.

DRESSED MEETS AND POULTRY.

Best carcass of long-wooled sheep,*	$5
2d best do,	3
Best carcass of middle-wooled sheep,	5
2d best do,	3
Best carcass of cross-breed,	5
2d best do,	3
Best dressed hog, weighing over 350 lbs.,	5
2d best do,	3
Best dressed hog, less than 350 lbs.,	5
2d best do,	3
Best pair of dressed turkeys,*	2
2d best do,	1
Best pair of dressed geese,	2
2d best do,	1
Best pair of dressed ducks,	2
2d best do,	1
Best pair of dressed capons,	2
2d best do,	1
Best pair of dressed fowls,	2
2d best do,	1

Culture of the Onion.

Danvers, Mass., Dec. 5, 1853.

Messrs. Editors—In reply to the inquiries made by C. N. B., of Orient, L. I., in your paper of Dec. 1st, I beg leave to say, that I have given much attention to the growing of *onions* for a dozen years past, and can say with confidence, that there does not exist the same necessity for *a rotation of crops* in the growing of onions, as there does in most other crops. I am aware, that I express an opinion directly at variance with that expressed by your correspondent; nevertheless, the large quantity grown in this vicinity (not less than 100,000 barrels annually), and my frequent intercourse with those who have managed their cultivation, makes me quite as confident in this matter as any other of vegetable culture. I do know fields on which onions have been grown for *twenty years* or more successively, without any apparent diminution of crop, by reason of the continued culture. So general is the impression that onions vary from other crops in this particular, that it has become almost a proverb, that "onions will do well without a change of crops."

That benefit will accrue from varying the manures applied, there can be no doubt; and that liberal dressings of manure (say, from five to eight cords to an acre each year,) is also perfectly clear. Perhaps such application of manure remedies the objection naturally arising from the exhausting of the ingredients necessary for supporting the crop.

Your correspondent asks—"What is muscle bed?" I understand it to be mud at the bottom of salt water rivers and creeks, filled with the muscle or the shells of muscles. Thousands of loads of this material are annually collected in this vicinity, and applied to the lands. It is considered a valuable dressing for onion lands, once in half a dozen years; and some apply it oftener. It is certainly a valuable dressing in apple orchards, as I have myself witnessed.

Your correspondent speaks of his onions *rotting*. No such affection troubles our crop, excepting *a rot* occasioned by the imbedding of a small maggot in the bulb of the young plant.

The *red*, the *white* and the *silver skin onions* are the varieties usually grown by the cultivators in this neighborhood. There are other varieties of onions, but I am not familiar with their culture.

Your correspondent asks for information as to *soiling of cattle*. He will find it in a paper prepared by Hon. Josiah Quincy,* of Quincy, who has practiced it for thirty years or more, and who understands the subject, root and branch. This communication was published in 1852, among the papers of the Norfolk County Ag. Society, and afterwards in the Mass. Ag. Transactions for 1852. Mr. Quincy's views are entitled to the highest regard.

Having been much instructed by your valuable paper the last year, I cheerfully forward these remarks for its columns. Very resp'y, your ob't serv't. J. W. Proctor.

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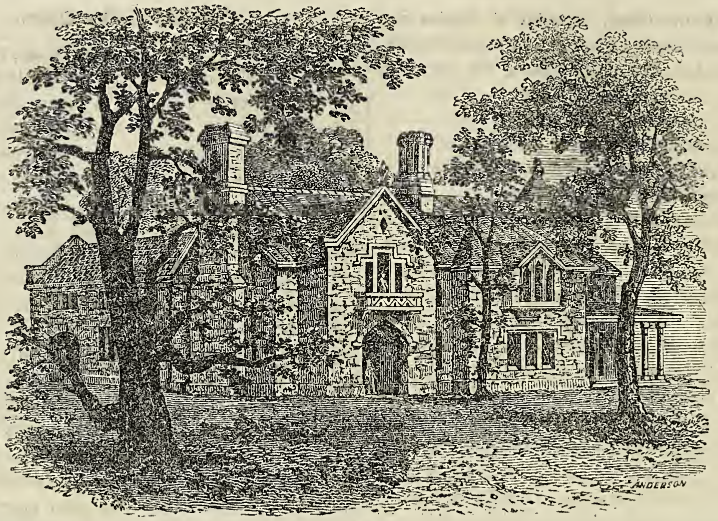
* The mutton and poultry, when dressed, to have head and feet left on.

* We shall soon insert this valuable paper.—Eds.



Design for a Spacious Country-House.

Our readers will remember when the common style of building, many years ago, was the simple square box, or clap-boarded frame, perforated with long ranges of numerous windows. And as a general thing, the greater the number of windows, or the more nearly the dwelling approached a cotton factory in external appearance, the more aristocratic of course was its expression. At a later date, a supposed improvement was made, by adding four tall, elaborate Grecian columns to one side of these perforated boxes, reminding one of the fine new patch on the old and tattered coat. Still later, the Gothic style found its way pretty generally into the more tasteful country erectinos, and this immediately led to all kinds of fantastic imitations. If a simple, sensible Gothic house was an object of attraction, then certainly it was thought that carrying the fashion to its utmost extreme, would be prodigiously fine. The result was that dwellings began to appear like mushrooms all over the country, some of them with their flimsy, floridly carved verge boards; others, with gables so numerous as to convey the idea of a hottentot village placed upon the roof; others again, had such extra fashionably steep roofs and short posts, as to look like a very long extinguisher on a very short candle.

At the same time we like a deviation from the dull monotony of blank walls, we want to see a sensible, common sense application of architectural forms. We have never seen the design of a Gothic dwelling, that excelled in this desirable particular, the one represented at the head of this article, and which we copy from a former volume of the Horticulturist. The moderate steepness of its roof—the agreeable proportion between roof and walls—the variety in its external expresssion and its perfect freedom from stiffness and formality—and its entire freedom from elaborate ornament, all produce an effect rarely to be met with. It is intended to be built of common quarry stone, the whole to be finished in a simple and rather rustic manner, furnishing a dwelling of this extent at a moderate cost. Where quarry stone is not near at hand, it may be built of brick, and rough-cast.

The plan of the principal floor is shown in Fig. 2, where the dining-hall, (a kind of hall and dining room combined,) or the office (or ante room) A, are entered

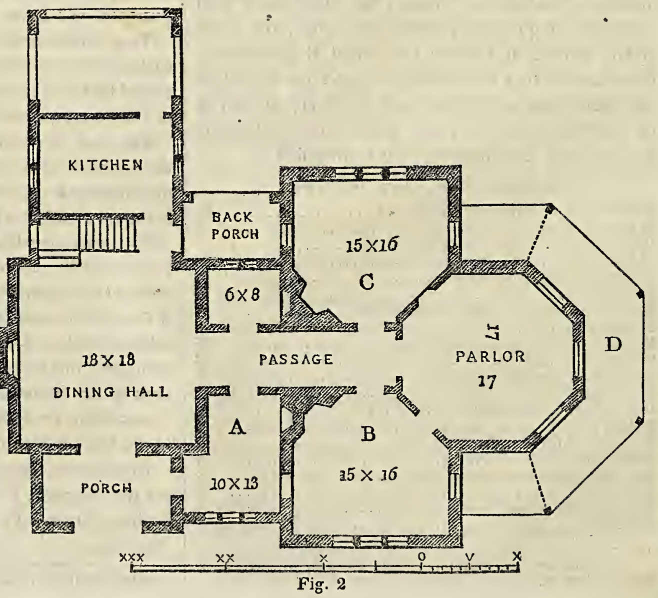


Fig. 2

from the porch. The octagonal parlor, the library B, and the bed-room C, are all of easy access from the central passage. The veranda D is entered by windows reaching down to the floor.

The plan of the second story is exhibited in Fig. 3, and shows five large bed rooms, and two smaller ones—furnishing, altogether, ample accommodations for a considerable family, and occasional visitors. This dwelling is adapted to the wants of the larger and more wealthy class of farmers.

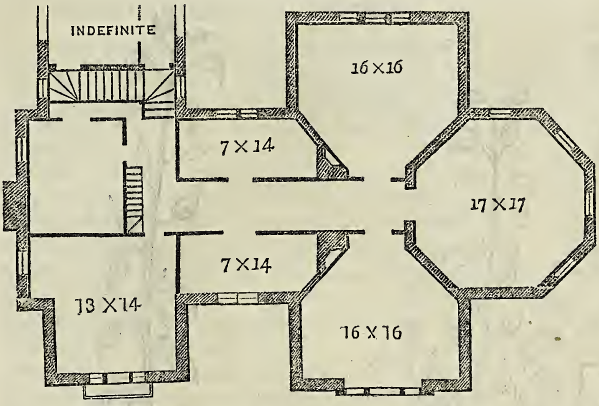


Fig. 3.

Pyramidal Pear Trees.

This mode of training may be applied to trees growing on both pear and quince stocks. We never saw handsomer pyramids than those of Hovey & Co., of Boston, worked on the pear. They make larger and more vigorous trees than on quince, and with the exception of the few varieties which seem to be peculiarly at home on quince stocks, more durable ones. Kept properly pruned, they need never become too large for garden planting. When the choice can be made we would recommend both kinds of stocks for pyramids, according to the variety under propagation.

Quince should be chos'n for such sorts as Louise Bonne Jersey, Diel, Angouleme, Easter Beurre, &c.; and pear for Bartlett, Doyenné d' Eté, Winter Nelis, Aremberg, Onondaga, &c., which often grow well on quince, but more so, generally on pear. Flemish Beauty, Bosc, Autumn Paradise, Marie Louise, Washington and others, will grow only on pear stocks, except in very rare cases. Even double-worked trees of the latter varieties often fail or dwindle after a lapse of some years.

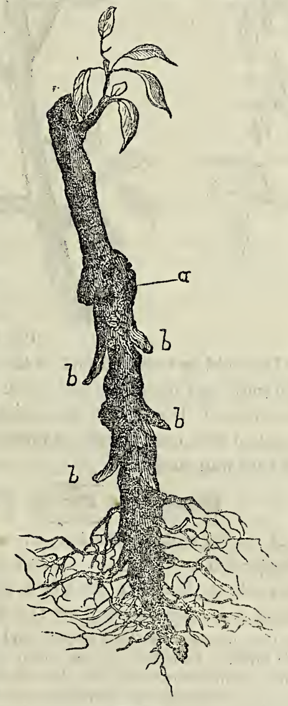


Fig. 1.

Those who have seen very handsome specimens of the Norway fir, when fifteen or twenty feet high, may acquire from them a good idea of the form of a handsome pyramid for the pear, except that the lower branches should not sweep the ground, nor the leading shoot or apex be quite so long and slender.

Training and pruning are now much better understood, generally, than five years ago; yet there is not one dwarf tree in twenty that is rightly managed, and we have frequent inquiries for simple directions on this point. The accompanying figures, and the

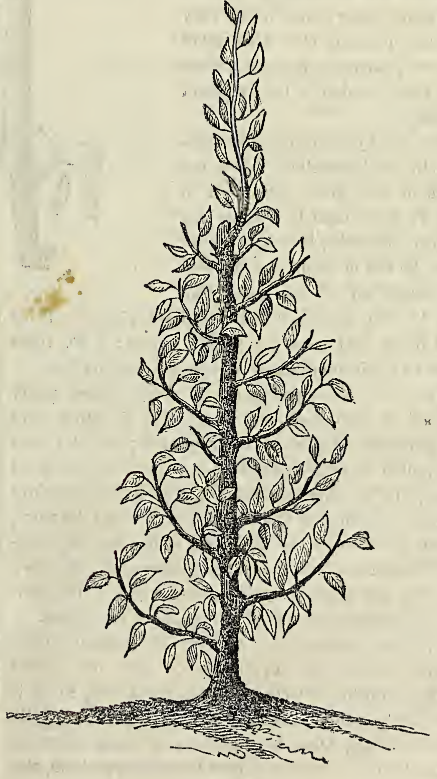


Fig. 2.

following explanations, may therefore prove of service:—

Pear trees on quince stocks should be set with the place of union even with or a little below the surface of the earth. It often happens, however, that the stock is destitute of roots for some inches below this point, as shown in Fig. 1, *a* being the place of junction. In order to induce the emission of roots, the stem may be tongued by raising about one inch of the bark, as shown at *b b*, and keeping it open by a small chip or piece of gravel. Roots will form without this care, but less speedily.

After the stem has grown one year, it is cut down to a foot or foot and-a-half, which induces a crop of side-shoots near the ground Early in summer, the ends of the upper ones are pinched off, except one leader; leaving those below, which otherwise are apt to be the smallest and weakest, to develop and grow strong; after which they too are pinched off. This gives the two year trees an appearance like Fig. 2, which is the incipient pyramid.

The third year, the side-branches will of themselves throw out three or four shoots, as shown in Fig. 3; these must be treated like the two year tree, that is, a leader must be left of each, and the others nipped off at the ends, like Fig. 4. The terminal buds on these pinched shoots may break and send out second shoots; if so, these must be again pinched off shorter than at the first.

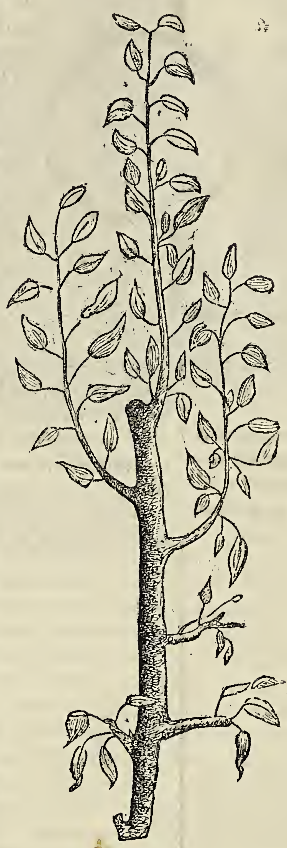


Fig. 3

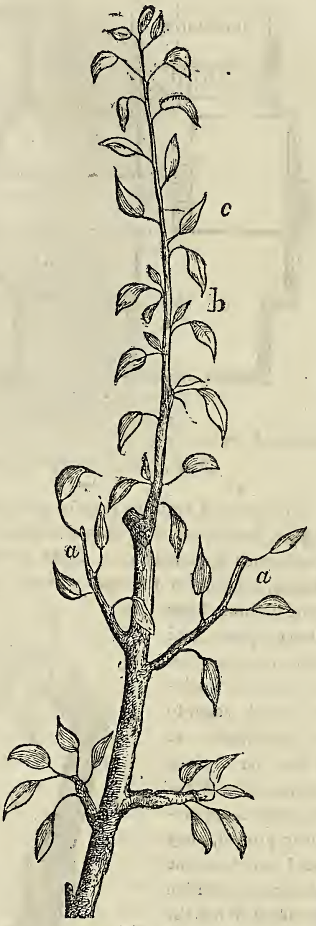


Fig. 4.

Trees are often purchased at three years, ready trained as here described, which will of course save the purchaser this labor; but the same principles must be applied in pruning the side-branches in subsequent years, the pinched shoots, *a a*, Fig. 4, forming fruit spurs, and beginning to afford moderate crops the third, fourth and fifth years. The trees should not be allowed to bear heavily till some years afterwards, as heavy fruiting and scant manuring is one reason of the short lives or feeble existence of many dwarf pear trees.

Upright growing trees, such as the Buffum, Louise Bonne Jersey, and Tyson, should have the leaders of the branches selected on the lower side, so as to give the pyramids a more spreading form; while with the Winkfield, Diel, Angouleme, and Glout Morceau, whose branches assume a more horizontal position, this precaution is not necessary.

In climates like ours, subject to deep snows, a naked stem a foot high, is safest from danger of splitting down.

It should be observed that as the roots of the quince are small and numerous, and never extend so far as pear roots, it is especially necessary that they be well supplied with nourishment by repeated manuring, and be kept well cultivated.

Barren and Fertile Flowers.

A correspondent mentions the case of a *Spanish chestnut*, that owing to a defect in the anthers, has rarely borne fruit, but which he has fertilized and rendered productive by dusting the flowers by a branch of the common chestnut cut off and brought ten miles. He adds, "Diœcious plants often produce fruit when there is only one in the neighborhood. The Irish Yew now has several red berries; and the American Yew has been most productive,—yet I have only one plant of each. On the English Yew, I have never yet seen a berry.

"Juniperus is also diœcious. I have but one plant of the *J. communis*, but it hangs full of berries. It may be a question, however, whether such seeds will grow? I cannot answer it. It seems strange that the berries should swell to their full size, if they are barren; yet there is a grape producing berries without seeds; and my chestnut has the *case* for the nut, but no *pit* or *kernel*."

Guano for Garden and Fruit Trees.

Messrs. Editors—Will you state in some of your papers, which is best for garden purposes, guano or bone dust, and in what quantities to the acre; also, what quantity might safely be applied to small trees, say eight or ten feet high.—L. D. Clift, *Mystic Bridge, Conn.*

Guano is the most generally used of these two manures, because it contains a much larger number of fertilizing ingredients. When the soil and plants are such as to be benefited to good advantage by bone dust dissolved in sulphuric acid, this and guano are about equal in their effects; but bone dust simply is several times less powerful, varying with its fineness, at the same time it is more durable.

From two to three and sometimes four hundred pounds of guano are applied to ordinary crops per acre, and about the same quantity of the superphosphate of lime, or dissolved bones. From half a ton to a ton of bone dust may be applied to an acre. Young fruit trees, whose roots do not extend beyond a circle of eight or ten feet, or in other words, trees about eight or ten feet high, will be well manured if a quarter to half a pound of guano is spread over this space for each tree, and then carefully spaded into the soil in autumn, or early in spring. If dug in later, the lack of moisture will prevent its being diffused through the soil. It is in all cases safer and more economical to make a compost of the guano before application, by mixing it thoroughly with several times its bulk of soil, and an addition of stable manure to this mixture produces an excellent effect.

Fruit Trees in Oregon.

I want to know, through your paper, what kinds are the best winter fruits, the largest sizes and most profitable to grow for an orchard, and also the largest and best summer and fall apples, and also the best for cider, also the best time for transplanting.

I have one seedling pear tree, the seed of which was planted in the spring of 1848, and now it bears seven pears; and a seedling apple tree, planted in the spring of 1847, and this is the third crop of apples.—G. *Marion county, O. T., Sept.*, 1853.

For summer apples, the Red Astrachan, Sops of Wine, Sweet Bough and Toole's Indian Rareripe, stand first for good size and fair fruit. For autumn, Gravenstein, Porter, Dutch Mignonne, Hawley, Fall Pippin and Twenty Ounce. Haskell Sweet is the best and largest fall sweet apple. For winter, Belmont, Baldwin, Red Canada, Rhode Island Greening, White Bellflower, Rome Beauty, Swaar, Esopus Spitzenburgh, Northern Spy, Peck's Pleasant, Canada Reinette. Jonathan, although not large, is fair, handsome, and very productive. We are not acquainted with cider apples, but the last named would no doubt be one of the best. Hewes's Crab has had a high reputation for this purpose.

The best time for transplanting, is at any time between the fall of the leaf, in autumn, and the swelling of the buds, in spring. If the leaves do not fall soon after the cessation of growth, they may be stripped off artificially, and the work then performed with perfect safety.

Knevett's Giant Raspberry.

There are four varieties of the raspberry, all of great value and excellence, that much resemble each other in general appearance and character; these are the Fastolff, the Franconia, the Red Antwerp and Knevett's Giant. On the light soils which we occupy, we find the Fastolff particularly fine, and the Franconia of nearly equal excellence, and harder for market. We have never found either of them tender, in a climate where the thermometer usually sinks, sometime during winter, down as low as five or six degrees below zero, and in severe winters to ten or twelve below. The Red Antwerp is superior to either as a *market* sort, more particular on account of its firmness of texture, but the berries are apt to be incomplete or imperfect, except on deep and strong, rather clayey, soils. Knevett's Giant is a newer sort, which resembles much the Red Antwerp, except that the plant is said to be decidedly hardier. The berries are rounder and less conically pointed. It needs further time to prove its fitness for general cultivation.

We ought to add, in speaking of the hardiness of these sorts, that the Franconia and the Red Antwerp are frequently injured in localities no colder than our own, owing, perhaps, to suddeness of thawing, or other causes. For this reason, they are usually protected by bending over late in autumn, and covering with an inch or two of earth, which is removed in spring about the time the ground thaws, or soon after.

Protecting Trees from Mice and Rabbits.

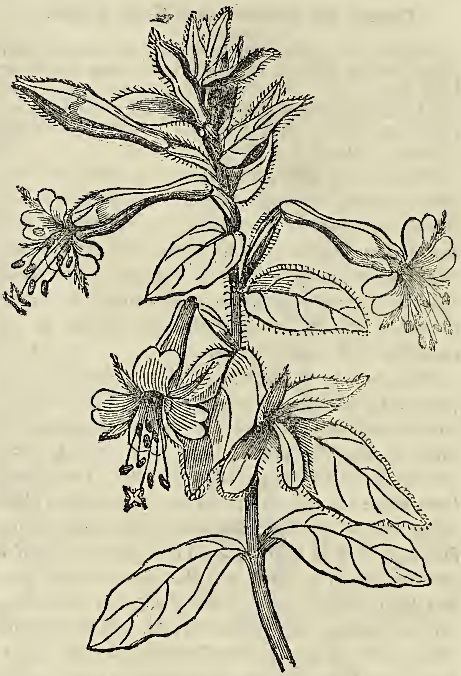
A writer in a former number of the Cultivator, recommends wrapping paper around the bodies of young fruit trees, to prevent the depredations of mice and rabbits. Instead thereof, I have used *wide* spiral-formed shavings, as they come from the carpenter's plane, secured at top and bottom with a small 3 or 4 oz. tack. If one shaving does not extend sufficiently high, a second or third may be used in continuation. The shavings thus placed thereon will last two years. James L. Bowman, *Brownsville, Pa., Dec.* 11, 1853.

Roses from Eyes.

Calling, a few weeks back, at the River-road Nursery, of Mr. H. H. Williams (late Jackson—known as one of the best commercial gardens for choice and good things round Cincinnati,) I was much struck with the expeditious and successful method practiced by that cultivator, in propagating roses. All the different classes are grown, but the greatest favorites are the Hardy Remontants and Bourbon varieties, which are known to be the hardest to strike from cuttings. As Mr. W. has but recently entered on the business for himself, his stock to propagate from was limited, and he desired to make the most of it and increase it as much as possible during the season.

His plan was, as soon as wood on his stock plants was sufficiently matured in the spring growth, to take it off, and instead of making cuttings, he used only a single eye, leaving about one or one and a half inch of wood below, and cutting off smoothly immediately above the eye, and slicing off part of the piece longitudinally opposite the eye or bud. These he plunges in sand to the top, leaving only the bud and leaf attached visible (in a brisk bottom heat); they soon callous and form roots; and Mr. W. at once plants them out into the open ground, without potting or anything, and gets in another batch. In this way he kept taking off successively from the parent stock as fast as they made wood. He showed us four different batches that had been taken off this season, planted thickly in rows, and fine growing young plants they were, varying in size and height, according to the respective time they had been planted. He stated that out of about 4,000, the far greater part of which were from eyes, he did not have over a hundred miss (which is a good take,) and he believed they made better and handsomer plants when struck in that way than by cuttings. One important point is observed to be necessary, that is, to keep the bottom heat the most active at first, so as to induce the formation of roots before the bud bursts; if the latter takes place before the roots are emitted, the plant is sure to go off, and *vice versa.*

Artificial heat, by means of hot water to raise bottom heat, is employed here during summer even, for propagating roses, as well as stove and green-house plants; and his plan for economy and efficiency is well worth being known and extensively practiced, and differs considerably in detail from any thing we had seen before. Altogether, we came away convinced that Mr. Williams is ahead of some of his compeers, in this branch of his business at least.—C. S., *Cincinnati, Nov.* 28, 1853.



Zauschneria Californica.

The Zauschneria is a native of California, and a herbaceous perennial, quite hardy, if planted in a situation where it is not much exposed to damp about the roots in the winter. Its habit is branching and bushy, growing about three feet high, and as its blossoms are large and numerous, it forms quite an attractive plant.

North Western Pomological Convention.

From a brief report of this Convention in the advertising sheet of the Western Horticultural Review, we perceive there were some 30 or 40 contributors of fruits, most of whose collections of apples varied from 40 to 150 varieties, and there were a number of collections of pears from 100 downwards. From a fine selection from these collections received through the kindness of Dr. Kennicott, we perceive, in accordance with the statement of this report, that those from Iowa and the more western districts, were much finer in appearance, generally, than specimens from the east

Among the results of the discussions on pears, we observe the following:—Bartlett, White Doyenné, Easter Beurré, Flemish Beauty, Seckel, "best," for general cultivation; Louise Bonne Jersey, and Passe Colmar, very good; Winter Nelis, good, not successful in all localities; Bloodgood and Dearborn's Seedling, recommended for further trial; Madeliene, too subject to blight; Washington, not sufficiently tested. The Isabella, the best grape for general cultivation; and Catawba "superior" where ripening. Among the peaches recommended were Crawford's Early, Early Barnard, Early York, Large White Cling, Crawford's Late, and George the Fourth—the two first for general cultivation.

Hints on Stabling Horses and Cattle.

In all the arrangements for constructing and keeping stables in order, the comfort, and consequently the health and thrift of the animal should be kept constantly in view. Some farmers, well satisfied with the importance of a pure air, think it sufficient to open a stable window or door occasionally, for this purpose. This usually throws in a strong cold current about the animal's feet, the warmer and fouler air remaining, by its less specific gravity, in the upper part of the stable, and unreached by the fresh current. A wooden tube, running up like a small chimney from the upper part, in which the current may be regulated according to the coldness or windiness of the weather, by a wooden valve, is far better. Cleanliness under foot is another very important ingredient to the comfort of animals. This can be secured only by a good stone or plank floor, very frequent cleanings, and a sufficiency, not superabundance, of clean dry litter. Remember, it is about as easy to throw out a cart load of fresh droppings, in fifty different operations, performed three times a day, as to do it once a week, at one formidable and disagreeable task. A stable, clean underfoot, is absolutely essential to a pure air.

Many horses should never be stabled in one apartment, or in adjoining stalls, under one roof. For if one becomes affected with disease, especially if a contagious one, the others in all probability will receive it. One horse getting loose, will disturb the rest; or if one becomes restless from any sudden attack, the noise deprives the others of their regular repose, and renders them also more liable to an attack. It is said that a marked difference in the amount of labor performed by a set of horses, has been observed after a night of disturbed repose from a single affected animal. Every farm should be provided with at least one "loose box" (or room for turning in loose) for any animal that may become diseased.

Sometimes the difficulty of *access to litter*, prevents a proper attention to the comfort of stables. It may happen to be stowed away in some remote corner of the barn, or still worse and more common, out of doors, covered with snow or drenched with rain, and rendered in a great measure unfit for its intended purpose. The straw of threshed grain cannot be deposited in too convenient a position. A good arrangement is to place the "straw-barn" between the grain barn and the stables, and partly over the latter.

Stables are commonly made too small. Many of the stalls made for horses are not over twelve feet in length, including manger or feeding-box. Eighteen feet would be much better. The partitions should be of strong and solid timber, and sufficiently high and tight to prevent their seeing or smelling each other,—the usual preliminary to kicking. Boxes should be ten feet square.

Cattle, that are stabled in winter, are more apt to be neglected in cleanliness, than horses. It seems revolting, that the animal from which we derive so much of the supplies for the table,—butter, cheese, milk and cream, should be compelled to lie on foul beds and breathe a foul atmosphere. Such causes must of necessity injure the quality, and lessen the quantity of these products, at the same time that the animals suffer in condition. Clean dry beds, from very frequent cleaning and attention, and a good wholesome air, would certainly contribute much to the comfort of the animal, and still more, we should think, to the comfort of the owner and attendant, if they have any appreciation of the elements of comfort and enjoyment.

Importation of Cattle.

Messrs. Morris and Becar received a very valuable addition to their herd a few weeks since, in the Short-Horned cow "*Jacintha*," purchased by Mr. Morris while in Europe last year, of Mr. J. S. Tanqueray, of Hendon, an account of whose extensive and valuable herd will be found in the Letter of our London correspondent published this week. Mr. T. has one of the best herds in England, and we have heard "Jacintha" spoken of by those who had seen her in England, as one of his best. Her pedigree and portrait are published in the last Vol. of the Herd Book, and seem to justify the encomiums she has received.

The ship Queen of England, from Liverpool, arrived at New-York Nov. 20th. There were shipped on board this vessel, a very valuable cargo of domestic animals, consisting of the Short-Horn bull "4th Duke of York," owned by Gen. Cadwallader, of Philadelphia, and Mr. Vail, of Troy, whose pedigree was published in the Country Gentleman, of Nov. 17th—the Short-Horn bull "Lord Ducie," purchased of Mr. Bell, by Dr. H. Wendell, of this city—thirteen South Down Sheep for Gen. Cadwallader—five Horses, eleven bulls, twelve heifers and heifer calves, and thirty-six sheep for parties in Kentucky. The ship experienced very bad weather, soon after leaving port; and we regret to have to add, resulted in the loss of the splendid bull "4th Duke of York," for which Messrs. C. & V., it will be remembered, paid 500 guineas—a loss not more to be regretted in a pecuniary point of view than to the stock-growers of the country. In addition to this, five of the bulls, five or six of the heifers, and about a dozen of the sheep for Kentucky, were lost on the passage. A correspondent furnishes the following account of these losses: "The weather became very boisterous almost immediately after the vessel left Liverpool; when two days out, during a heavy gale, 4th Duke, who was very heavy and in high condition, became restive and broke from his stall or box, but was secured without damage to himself or others. During the succeeding night, however, the gale continuing to rage violently, he was suddenly thrown forward, (in a cross sea,) on his head, and broke his neck, and was dead in less than two minutes. During this gale, as well as at short intervals through the voyage, one after another of the Kentuckians' animals were either suddenly killed or died from bruises and other injuries."

Dr. Wendell's bull, we are glad to learn has ar rived at his farm, in good order, having suffered but little on the passage. His pedigree, furnished us by Dr. WENDELL, is as follows:—

LORD DUCIE, roan, calved May 5th, 1852, bred by Mr. R. Bell, (the nephew of the late Mr. Bates,) of Mosbro Hall, St. Helens, near Liverpool—got by the Duke Bull 5th Duke of York (10,168)—who was bred by Mr. Bates, and who is full brother to 4th Duke of York (10,168.) Dam, Briar, by 2d Duke of Oxford (9,046)—who is also the sire of 4th and 5th Dukes of York, and *grand sire*, on the dam's side, of Col. Morris' Duke of Gloucester, who was recently bought at Lord Ducie's sale for 650 guineas. Gr. D., Beauty, by 2d Cleveland Lad (3,408,) who is the sire of Mr. Thorne's Grand Duke (10,284,) who was recently purchased in England for 1,000 guineas. Gr. Gr. D. by 2d Earl of Darlington (1,945,) who was bred by Mr. Bates, and got by the celebrated Princess bull Belvidere (1,706) out of Young Trinket, by Symmetry)643,) who was bred by Sir Henry Vane Tempest. Gr. Gr. Gr. D. by the Duke of Cleveland (1,957,) who was bred by Mr. Bates and got by the Daisy bull Bertram (1,716) out of Duchess xxvi., by 2d Hub back (1,423,) &c., &c. From the above pedigree it will be perceived that Lord Ducie is very rich in Duchess, Princess and Oxford crosses; he is also represented to be a very fine animal and *very* much liked in England.

Mr. Chapman's Short-Horns.

MT. PLEASANT FARM,
Clockville, Madison Co., N. Y., Nov. 23, 1853.

FRIEND TUCKER—You doubtless recollect that at the time of Mr. VAIL's sale in 1851, I purchased at private sale, "Hilpa IV.," then two and a half months old, for $300. This heifer won the first prize at the State Fair held at Rochester, as a calf, and the first at Utica, as a yearling. The 13th of April last she produced a fine roan bull calf, which I sold, July 4th, to L. W. RATHBUN, of East Springfield, Otsego Co., for $300. Mr. RATHBUN, in a letter to me, dated 21st October last, says—"Cupid won the first prize at our County Fair, and I was offered $500 for him, but I told the man I could not take it."

So far as I know, (and I believe I have heard from all but one,) I have never yet sold an animal, (short-horn,) that has failed to win a prize, wherever exhibited, whether at State or County Fairs; and I think, with only one exception, that I have myself always won a prize on every animal exhibited for this purpose.

Below I give you the pedigree of Mr. RATHBUN's bull:

CUPID, roan, bred by S. P. CHAPMAN, calved April 13th, 1853—got by Halton* (11,552)—Dam [Hilpa iv.] by Duke of Wellington 55, (3,654)—(bred by Mr. Bates and imported by Mr. Vail)—g. d. [Hilpa,] (also imported by Mr. Vail,) by Cleveland Lad (3,407)—gr. g. d. [Hawkey] by Red Rose bull (2,493)—gr. gr. g. d. [Hart] by Rex (1,375)—gr. gr. gr. g. d. bred by Mr. Richardson, of Hart, Durham, England, from an old and celebrated milking tribe of Short-Horns. Repectfully yours, S. P. CHAPMAN.

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We are using boiled carrots and meal for our fatting hogs, and think they make good food. They are probably worth more than potatoes for fattening—though actual trials are wanted to determine the question.—*Massachusetts Plowman.*

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* Halton is a Lady Barrington bull, being sired by Meteor 104 (11,811.) Dam, Lady Barrington iii., &c., &c. Hilpa iv., Halton, Meteor and Lady Barrington iii., have each won first prizes at the shows of the New-York State Agricultural Society.

Small and Large Red Clover.

EDITORS CULTIVATOR—Is there more than one variety of Red Clover? That is, is there really a big kind and a small kind, as we often hear spoken of?—Seedsmen and agriculturists disagree about this, I believe. At least there is a *pretended* difference, and I wish to know whether there is a real one, and if so, by what means the seeds may be known from each other. GEO. A. DUDLEY. *Ellenville, N. Y., Nov. 28th*, 1853.

There are two distinct sorts, doubtless varieties of the same species, one of which grows considerably larger than the other, and ripens its seed about a fortnight later. It is not now much cultivated, we believe, as in our climate it does not ripen its seed after cutting the first crop for hay the same season, as happens with the common or smaller sort. The large variety is too coarse for good hay, especially on rich soils, but is preferred by some cultivators for green manure on account of its heavier growth. We know of no way to distinguish the seed.

The common red clover is ordinarily a biennial, sometimes, however, continuing three years on light soils, its longer growth being sometimes perpetuated by self-seeding. There is a smaller species (*Trifolium medium*) that has a perennial root and light red or whitish flowers, that some writers have spoken highly of. and among the rest, Sir John Sinclair, who raised on a very rich piece of ground a crop which, when green, amounted to several tons to the acre (the precise amount we do not recollect,) but as it has never found its way into general use, it may not be of great value.

Hedges—Information Wanted.

MESSRS. EDITORS—In the 18th number of the present volume of the Country Gentleman, I find an extract from an article on "Osage Orange Hedges," by Prof. J. B. TURNER, of Illinois. As his place of residence is not given in the extract, I will ask, through your columns, of Prof. TURNER, or some other gentleman of experience, the most approved mode of raising the plants and cultivating the hedge, giving the manner of sitting, and the treatment for the first four years, with the form of the hedge at different periods during the time. A SUBSCRIBER.

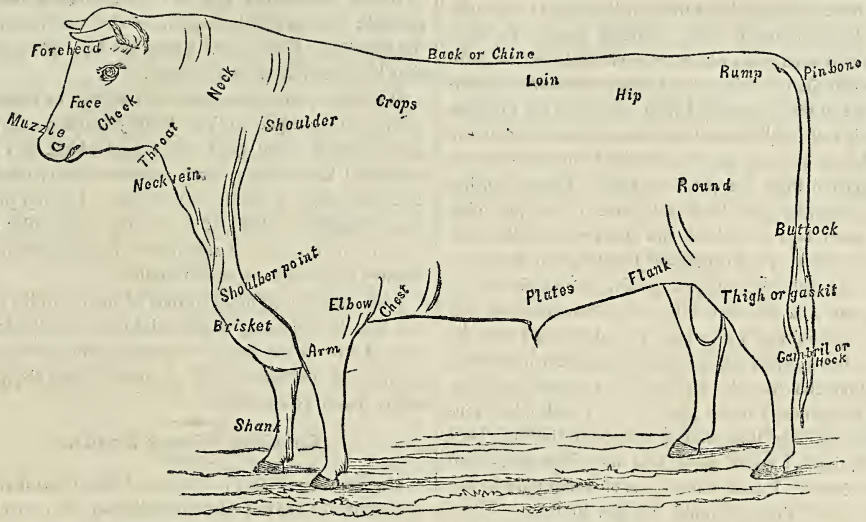
Wild Cherry for Hedges.

MR. TUCKER—I have been a constant reader of the Cultivator for a number of years, and have observed at different times, a variety of plants recommended for hedges, but have never noticed the common wild cherry recommended for that purpose. I think it one of the best kind of trees for that use, for various reasons, some of which are, that it is easily transplanted—it produces no suckers from the roots—it is very thrifty—its timber is valuable, as also its roots for medicinal purposes—it will live well when lopped, and is a very thrifty tree, frequently growing four or five feet the first year from the stump; and here let me say, for the benefit of other farmers, that the sprouts should not be allowed to grow from the stump, if the lops are expected to flourish for a hedge. E. GRIFFING. *Westhampton, Suffolk county, N. Y.*

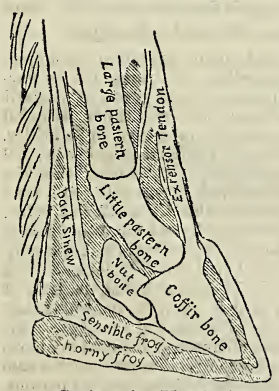
Common Terms Denoting External Parts of Animals.

For the benefit and interest of our young readers, we give in the annexed figures an explanation of the more common English terms used in describing the external parts of horses and cattle. The names being placed upon the parts designated, the impression is vividly and distinctly made through the eye, in a better manner than by the usual mode of references.

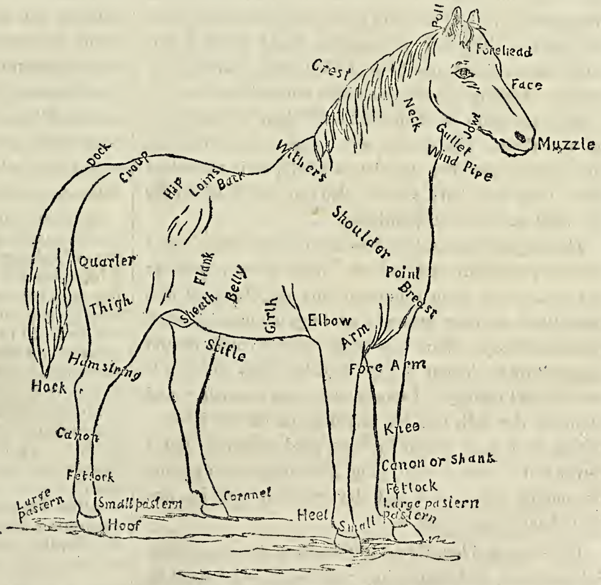
The structure of a horse's foot, which every one who owns a horse should understand, is distinctly exhibited in the accompanying figure.



Explanation or Chart of English Terms used in Describing the External Parts of Cattle.



Section of a Horse's foot.



Explanation or Chart of common or English Terms used in describing external part of a Horse

Good Wheat Crop.—It appears from a statement in the Southern Planter, that Mr. Charles Friend, of Prince George Co., Va., harvested 3,309 bushels and 12 pounds of wheat from 135 acres, averaging but a fraction less than 29 bushels to the acre.

Mr. Z. B. Wakeman, of Herkimer county, informs us that he has hired one of the South Down Rams, imported by Mr. Morris, from Mr. Webb's flock. It is a splendid animal, and cannot fail to be of great service to Mr. W.'s fine flock.

The Crops—Practical Farming

NEAR GENEVA, 9th December, 1853.

MR. TUCKER—After a long silence, I write you about crops, &c. Our wheat crop in Seneca and the adjoining counties, was not so much hurt by the wheat midge as in 1852; still there was a serious loss by that insect, more especially on all wet or damp soils, where the wheat is always later than on thoroughly dry soils. The Mediterranean wheat suffered least. In some fields, and even some whole crops of white wheat, were not worth the threshing; but though wheat was in general not so much damaged with midge as the previous year, it was not because there was any decrease of the insect, but because the wheat was from eight to ten days earlier than the previous year. This was owing to the weather after the wheat came in ear, as mine only came into ear about two days earlier than the previous year; yet I commenced cutting ten days earlier. My own crop was pretty fair. From 45 acres of land, minus a fraction, I had eighteen hundred and thirty dollars' worth of wheat, provided I had sold the whole, but I sowed 100 bushels and kept for home consumption 103 bushels, and sold the remainder. So, upon the whole, I had a paying crop; and I had conclusive evidence that, had it not been that my land was drained, I would have had no better crop than many others. I had a few spots of damp land in one field, that I thought would not pay to drain. When we came to harvest it, we found the midge had taken it all, while the drained land was good. In another field there was a ridge of some seven or eight acres, that, although a little wet, I expected would bring a fair crop, but at least one-half of that was destroyed by midge. I have drained this eight acres this fall.

Our corn crops were much better than was expected at one time. The drouth was very severe for some time; still, take the crop as a whole, it is not a bad one. Oats and barley were also fair crops wherever the land was in good condition.

The hay crop throughout western New-York, is said to be a very short one, and the high price proves it; but mine, and some others in this neighborhood who treat their mowing grounds as they ought to, had an abundant crop. Mine was as good as it could be and be profitable. When it gets laid too early the hay is not of good quality. I never pasture my mowing land close in the fall, nor let anything on it in winter or spring, and keep it rich by barn-yard manure, and I never fail of a good crop. The grass covers the ground thoroughly before hot and dry weather sets in, and then drouth don't hurt it.

I have now 52 cattle and 260 sheep treading straw into manure, and eating hay and meal, and I shall by and by send you eastern men some first-rate beef and mutton, and have a large quantity of manure to raise more large crops; but any part of my land is as rich as is profitable for wheat. No other than Soule's wheat would stand up now; but for grass and Indian corn, I am yet to learn the extent I might go in manuring before it would have too much. This is the second time I have got my land almost too rich for wheat; but I can soon reduce it by cropping more. This year I have sown 13 acres with wheat after the oat crop was taken off, which is the second time I have ever done so; but I know the wheat would be almost certain to lodge, if fallowed.

Our potatoes have almost all rotted.

Wheat looks very fine this fall, what is on the ground; but very little is sown in this and neighboring counties. I have fifty acres, but hear of very few that have sown half that amount.

If some of your subscribers in Maryland or Virginia, or even the extreme south of Pennsylvania, would furnish me with some good white seed-wheat, say 100 bushels, I believe by getting it from an early climate, I might escape the midge altogether. I would prefer Soule's wheat. I hope, if I live till next July, that some of your numerous subscribers in that part of the country will write me on the subject.

I have put in all of 2,500 rods of under drains since last March, and many of my neighbors are also draining. I will never have many more drains to make, for want of undrained land. I remain, dear sir, yours truly, JOHN JOHNSTON.

Leveling Winter Roads.

MR. EDITOR :—In the Report of the Commissioner of Patents for 1851, I find a description of a machine for leveling roads after snow storms and drifting winds in winter, which strikes me as eminently feasible, and which I am satisfied, in many parts of the country, would be found of great utility. I enclose you the material portion of the statement, in the hope that if the remainder of the winter should happen to prove severe, a trial of its merits may be made in districts liable to be blocked up with snow. The communication in the report from which I copy, is from the pen of Mr. JOHN THOMAS, of South Barre, Vermont. He says:

> In 1846 I invented and put in operation an implement consisting of three rollers, or drums, for the purpose of rolling land in summer and roads in winter.† I have used it for four years past, and it has exceeded my most sanguine expectations in regard to its utility. One span of horses (weighing twelve hundred each) will roll from 20 to 25 acres per day. In winter, when the snow is one foot deep, four such horses will roll a road three miles per hour, leaving the track 12 feet wide, the snow being hard and smooth, and but three inches deep. On Monday, the 23d December, 1850, the snow fell in the vicinity where I live two feet deep, drifting on the road to the school-house one foot, making it three feet deep. On Tuesday we drew the roller over it twice, with three yoke of oxen and one horse, the weather being cold. On Wednesday I trotted my horse (weighing fourteen hundred) over this road, at the rate eight miles per hour, drawing a sleigh and six persons, averaging in weight 120 pounds each, passing sleighs

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† The general nature of the implement, the details of which do not clearly appear from Mr. Thomson's drawing and description, is as follows: Two of the three rollers are placed in a line, on the same axle, four feet apart. The third one is placed some distance behind, and rolls over the space left between the two front ones. The front rollers are four feet long, each, and the rear one five feet. They are all four feet in diameter, and are made in the form of drums; the heads of two inch, and the staves of one and a half inch plank. The machine is loaded as occasion requires.

in perfect safety without breaking the trot, the horse's hoof not indenting the snow more than two inches, and the sleigh not cutting in more than half an inch. I have, in years past, commenced rolling when the first snows falls, repeating the rolling every snow storm, until, in some drifting places, the hard snow has accumulated to the depth of six feet, and have seen loaded teams pass each other as fearlessly and safely as an eagle will sail over our hills.

Another advantage is, that a wheel carriage is enabled, by the use of this roller, to run with ease and safety, enabling teams to cross over hills and vales in the spring, when the snow is melting and the ground is bare in spots. Again when the snow is going off, it melts gradually, and does not gully the road, as it otherwise would.. In 1848, one foot of snow fell in December.—I rolled the road from my house to the village, (it being two miles.) Soon after the wind arose and blew the snow out of the road in spots, drifting it in other portions on all the roads in this vicinity. No more snow fell that winter. There was no good sleighing or waggoning on the roads that were not rolled all winter; but on the rolled roads we had both.

The cost of a triple roller here is $15 and I presume there are but few schools or highway districts in Vermont, or in any of the neighboring States where snow abounds, which have not team enough to draw a roller. And it would be one of the greatest favors the State Legislature could confer on the people to pass an act requiring them to furnish themselves with rollers, and roll the roads of their respective districts every time the snow falls four inches. The same roller will be sufficient to roll the land for a whole district by putting on a body and a pair of thills to each roller—thus giving you three one-horse rollers.

There are many districts in this state, where this "Roller," once adopted, would be found indispensable. The elevated parts in the southern towns of this (Onondaga) county, are some times shut out for days and weeks from all convenient intercourse with each other, or with their neighbors, and yet with this implement I am convinced they might always have good roads. Commissioners of Highways, I imagine, already possess the requisite authority for providing themselves with Mr. Thomas' implement. I hope a trial will be at once made of it, and the results communicated to the public. S. *Syracuse, Dec.* 1853.

The Potato Disease in Great Britain.

The Farmer's Magazine (London) thus alludes to the Potato Disease of 1853 :—

When shall we have done with the alarms, the theories, the specifics, and with the reality of the potato disease? That it seems to be now, nearly beyond all precedent, serious ; that it has assumed even new phases of virulence; and that it has utterly, hitherto, baffled all possible efforts of man—appears to be acknowledged. Science and skill, practice and experiment, seem all set at one fatal defiance. The Potato Commission met, and investigated, and reported ; and were as powerless before it as they are before war, famine, and pestilence. Nor does the tendency to disease apparently wear out. If it lies a little more quiescent one year, it is only to break out with renewed vigour the next : if one species of potato is free one season, it is the more severely diseased in the following : nay, it seems as if some vast providential arrangement were at work, specially to baffle the wisdom of man, and to say to his science, his philosophy, and his skill, "Hitherto shalt thou come, and no further !"

The phase of the potato disease of 1853 is peculiar. There are two remarkable characteristics which never before attended it. In all former years, the potatoes raised under glass gave early indications of the disease : on this occasion, there were few, if any, complaints on the subject. The next peculiarity was that, as soon as the stalks became brown and spotted, the disease was ravaging the tubers. But, on this occasion, the stalks were brown, in many cases, for weeks before any manifestation of the disease took place ; and it was hoped it had expended its virus in blackening the tops, when the tubers so long escaped. A third peculiarity was, that the crop this year was fully mature before the visitation took place ; and hence there was a prospect of a most abundant yield ; the disease set in after the heavy rains of September—a time when, otherwise, the plant was assumed to be safe. *But it was not the rain which caused it*, because in many instances, when the potatoes were taken up, and stored away carefully and dry, covered so as to have no evil atmospheric influence—still, on opening the pits or removing thecover, if housed, they were just as bad as if they had been fully exposed. All precedent, all experience, all accumulations of knowledge, all things set at naught, with one fell swoop.

Nor is it peculiar. In the north and south of England, in the whole of Ireland, and in the generally more favored district Scotland, the disease seems to have spread, while in Canada it has appeared with great virulence. We have not heard how the small islands of Scilly and the Isle of Wight have this year been favored, as they have usually escaped in a considerable degree, when others have been sufferers.

In this country the disease has resolved itself into a simple question of the abstraction of so much food—fully thirty per cent. of a good crop are already gone ; but in Ireland the investigation is more vital and stirring. We have before us a report of the meeting of the Chemico-Agricultural Society of Ulster, in which the plan of Dr. Bollman was completely canvassed, with other modes proposed to arrest, if not to cure, the disease.

Dr. Bollman's principle seemed to us by far the most reasonable of all recommended, if the disease were at all inherent from the the parent tuber. Dr. Hodges demonstrated the disease to be a fungus, breaking up the structure of the potato ; and if there was seminal infection, like the smut in wheat, Dr. B.'s plan of high-drying the tubers was by far the most rational one we knew of, especially as extreme dryness is absolutely destructive to the sporules of almost every fungus, and the Botrytes, the peculiar fungus of the potato disease, was unlikely to find a nidus in so highly-dried a set. But if it be first of all atmospheric, as is all but certain, and if the decomposing mischief is *from without*, we cannot see how Dr. Bollman's preparation could be at all effectual.

And so it appears it has failed in numberless instances ; and so has peat charcoal, as well as pulling up the stalks, planting in spent tan, and a thousand more similar schemes of prevention.

The whole of the facts, however, lead to this conclusion—plant as early as possible, so as to get a large portion matured and sold before the disease sets in, as it usually does with great severity late in August, though this year it was about the middle of September before it became general.

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The Progress of Reaping Machines.—It is remarkable what an impetus has been given to the manufacture of reapers in England, since Hussey and McCormick exhibited their machines at the London Crystal Palace. Upwards of *thirty patents* were taken out there during the first half of the present year, and among the patentees were to be found men of every degree, from Whitworth, of Manchester, the first machine maker of the day, to country wheelwrights and blacksmiths, who were tempted by the cheapness of patents under the new law, to protect their crude ideas.

First Year of the Country Gentleman.

THE Country Gentleman has nearly completed its first year, and a few words with regard to its prosperity are proper at this time. From the commencement, no extraordinary efforts have been made to obtain a large circulation for it, and we have abstained from the excessive parade of its merits and its claims upon the support of thinking, progressive farmers. It has been our purpose to make it a superior Agricultural and Horticultural Journal, and at the same time to combine in it matters of taste, rural improvement, pleasant and instructive miscellaneous reading, and an abstract of the current news. By using small and clear type, we have been able to furnish a greater amount of both Agricultural and Horticultural matter than any other journal of a similar character, while we have had ample space for miscellany and news. We have endeavored to supply the Farmer and Gardener, and their families, with a paper strictly adapted to their wants, and one which should merit their respect and good will. That we have not failed in securing the confidence and approval of our patrons and the public generally, the many complimentary letters we have received, and the extent with which the articles in the Country Gentleman have been copied, both by the agricultural and secular press, are a satisfying evidence. Our circulation—thanks to our friends, who have generously recommended us to patronage—has been steadily increasing, and we shall enter upon a New Year with bright prospects and a full confidence in a greatly increased list of subscribers for our second year. But we base our expectations upon the continued aid and cooperation of those who are seeking with us the spread of agricultural knowledge, and of a pure and elevated fireside literature. It is only through the efforts of those who already know the importance and value of sound and practical instruction, that we can hope to reach the thousands who are insensible to the benefits growing out of reading, and who must be reasoned with and urged to avail themselves of the experience and wisdom of others who have worked their way into a more rational and profitable method of farming. While we shall continue with renewed energy our exertions to furnish a paper whose contents shall always be valuable to the farmer, and all who have any interest in rural pursuits, we earnestly solicit our present subscribers to lend us their best efforts to extend the circulation of the Country Gentleman.

We avail ourselves of this opportunity to return our sincere thanks to all who have contributed to our columns during the past year. We wish to have this journal the medium of inter-communication between thorough and accurate farmers, and to this end we solicit correspondence from those who have made careful experiments in any branch of farm pursuits, as well as inquiries with reference to the detail of farm practice. Let no one be deterred from committing his experience to writing because he is not practiced with the pen. Give us thoughts and suggestions in the rough—they are no less valuable or important because they may lack the graces of elegant diction. If farmers would have their paper promote their interests, they must write for it, and we should be glad to welcom a score of new contributors, among the hundreds of new subscribers who enroll themselves on our list as friends of agricultural improvement.

Again we present our hearty acknowledgments to all who have favored us with their patronage, or in any way contributed to the success which has crowned the advent of the Country Gentleman.

THE COUNTRY GENTLEMAN:

A WEEKLY JOURNAL

For the Farm, the Garden, and the Fireside.

This beautiful and excellent weekly paper has now been published nearly a year, and the gratification with which it has been received by the public, and the liberal circulation already extended to it, show that its general plan and object has met with the hearty approbation of those whose interests and improvement it was intended to promote. It combines in one large sheet, an Agricultural, Horticultural and Family Journal, furnishing, beside its large amount of practical matter on Rural Affairs, in its Fireside Department, a choice collection of articles peculiarly adapted to interest and exalt the views and aims of the Family Circle, together with a careful digest of the News of the Week, and a full report of the Produce and Cattle Markets.

It is illustrated with superior engravings, and printed in a neat and attractive style, making two handsome quarto volumes of 416 pages yearly. Price, Two Dollars per annum, in advance.

A new volume commences with the year 1854, for which subscriptions are solicited.

Specimens of The Cultivator and The Country Gentleman will be sent to all who desire them, and Postmasters and others interested in rural pursuits, are invited to act as agents. All letters to be addressed to LUTHER TUCKER,

Publisher of Cult. and Co. Gent.

The Cultivator for 1854.

This well known Standard Agricultural Journal commences a new volume (the 2d of the Third Series) with the January number for 1854, at FIFTY CENTS a year, making it the cheapest as well as the best work of the kind now published. To Clubs of eight or more, it is furnished at 37½ cents per copy.

☞ All new subscribers can be furnished with the first Vol. of the Third Series, for 1853—stitched in printed covers at 50 cents.

☞ Editors with whom we exchange, will confer a favor, by copying the above.

☞ We want Agents for the Country Gentleman and The Cultivator in every town throughout the country. Post-masters and others disposed to act as local agents, will be supplied with terms, samples, &c., on application.

"The Working Farmer."

The editor of this paper—a self-styled "consulting Agricultural Chemist"—devotes four and a half pages of his December number to a review, professedly, of the articles which have appeared in this paper on the subject of the analysis of his super-phosphate of lime, by our correspondent, Mr. S. W. Johnson, and shows, we regret to have to say, that his capacity for stating a case truthfully is no higher than that of his ability to impart instruction in chemistry. His whole course in relation to this matter, can be accounted for only on the ground that he desires to excite the sympathy of the public by representing himself as a greatly abused and persecuted man; for there is not the least foundation for the insinuation that Mr. Johnson's analysis was either made or published with a view to injure him, nor did it have any such effect. Mr. Johnson made the analyses of Mapes' and De Burg's super-phosphates of lime with no other view than the public good; and we venture the assertion that not one of our readers ever for a moment considered Mr. Johnson's article as an "attack" upon Mapes; but from some peculiar idiosincrasy of mind, Mr. Mapes chose to represent it as an attempt to injure him; and has continued for months totally to misrepresent the course of Mr. Johnson and ourselves in this matter.

We have no wish to prolong this controversy with a man who endeavors to sustain himself in a false position before the public, farther than is necessary to place the matter at issue in its true light. In the article alluded to, Mr. Mapes says—"That our position may be fairly understood, we beg to recount the history of this dispute." In this history, we are charged,

1. With having republished Mr. Johnson's analysis, "with deductions not warranted by the analysis itself, and calling its author Professor in Yale College."

2. With "parading the sulphate of lime represented in his analysis, accompanied by inuendoes that it arose from the addition of Plaster of Paris, added to the material with the view of wronging the purchaser."

3. With "publishing the analysis with such misrepresentations and such comments as were calculated to deceive our readers as to the quality of the improved super-phosphate."

4. With having published an analysis by Dr. Antisell, with which Mr. Mapes was satisfied, "and afterwards quoting an earlier and erroneous one, and coupling with it the name of *Professor* Johnson."

5. With having charged Mr. Mapes "with sending specimens made up for analysis."

6. With continuing to offer the "first analysis of Dr. Antisell and the analysis of Mr. Johnson to disprove the analyses of Dr. Enderlin and others."

Now we hardly know with what words, without overstepping the bounds of courtesy, to brand *all* these statements. *There is not, in either of them, one word of truth.* They are not misrepresentations merely.—There is no foundation, either in fact, or by implication from anything we have said, for any one of these charges. We have never "republished" Mr. Johnson's analysis—never made any "deductions" from it—never called Mr. Johnson "Professor in Yale College"—never "paraded the sulphate of lime"—never intimated that Mr. Mapes added "Plaster of Paris for the purpose of wronging the purchaser"—never published the analysis accompanied by "such misrepresentations or comments as were calculated to deceive," nor with any comments at all—never published any analysis by Dr. Antisell—never referred at all to either his correct or his erroneous analysis, and of course never connected the name of "*Professor* Johnson" with it; nor did we ever charge Mr. Mapes with sending "specimens, made up for the purpose, for analysis."

Thus from a single column of Mr. Mapes' article, we have shown him guilty of making about a dozen misstatements. What motive could have induced him to pursue such a course, it is no part of our business to inquire; but if his assertions about a simple matter-of-fact about which there can be no question, are thus inexcusably incorrect, we leave it for our readers to judge as to what credit should be given to his scientific deductions and his marvelous statements with regard to crops raised, and the benefit derived from his prescriptions as a "consulting agricultural chemist."

We do not deem it necessary to enter into a defence of Prof. Porter against such an assailant. If he deems any notice of the remarks of either Mr. Mapes or Dr. Enderlin, necessary, he is abundantly able to defend himself; but for ourselves we wish to say that in the discharge of our editorial duties, we consider the exposition of error as well as the elucidation of truth, incumbent upon us; and that, while we have found it necessary occasionally to expose the fallacious teachings and remarkable statements of Mr. Mapes, we have been guided by no unkind feelings towards himself or his paper.

Grass for Reclaimed Swamps.

I am very much pleased with the plan of asking questions, and receiving answers, through your valuable monthly; and being in want of information, I take that means to obtain it.

I have a piece of reclaimed swamp which I wish to seed with grass the coming spring, and am desirous of knowing whether I had better use Red top, Timothy or Fowlmeadow grass seed, and where I may obtain Fowlmeadow seed, and at what price per bushel. I would like to inquire also if Kentucky blue grass would be preferable to herdsgrass on lands that are permitted to remain five or six years at a time in pasture, and then plowed two years, and then laid down again to pasture. If any of your readers will answer these inquiries they will greatly oblige A Subscriber.

For *well drained* bogs, we have found nothing equal to timothy, sowed thickly so as not to make too rank a growth. Red-top is decidedly inferior to it. Both mixed would yield heavier than either alone. We can give no certain information relative to fowlmeadow and Kentucky blue grass for such soils, and request such of our correspondents as possess information on this subject to communicate it.

A Snug Wheat Field.—A. S. Upham, of Le Roy, N. Y., is reported to have raised from a field of one hundred acres, the snug little quantity of 3,600 bushels of wheat the present season, being about 36 bushels per acre.

Notes for the Month.

To our Agents and Friends.

In presenting to you the first number of the 2d volume of the third series of THE CULTIVATOR, we do not hesitate,—believing as we do that the reader will be more benefited than the publisher, to appeal to each and all of our readers, to aid us in the good work in which we are engaged, by renewing and increasing their efforts to extend the circulation of THE CULTIVATOR for 1854.

☞ All those disposed to act as Agents for The Cultivator, will please to remember,

1. That all subscriptions for eight copies or more, are to be paid for at the rate of 37½ cents each, and that the money, with postage stamps for any fractional parts of a dollar, should accompany the order.

2. After an Agent has ordered eight copies, he can order any less number at any time at the club price.

3. The papers will be addressed, when requested, to the individual subscribers, and to as many different post-offices as may be desired.

4. Great care should be taken to write the names and address of each subscriber, distinctly, thus:

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☞ Specimen Numbers and Prospectuses will be sent to all who desire them.

☞ All Agents for THE CULTIVATOR are authorized to act as Agents for THE COUNTRY GENTLEMAN, and to retain a commission, where four or more copies are ordered, of fifty cents on each.

Back Volumes of the Cultivator.

I. The FIRST SERIES consists of TEN volumes, quarto, of which a few copies are yet for sale—price, bound, $10.

II. The SECOND SERIES contains NINE volumes, octavo—price, bound, $11.25.

III. The THIRD SERIES commenced Jan'ry, 1853—consequently the first volume is now completed. Price, bound, 75 cents—put up in paper covers, 50 cents.

☞ Most of the volumes of all the series, can be furnished to complete sets.

☞ All new subscribers for 1854, would do well to order the volume for 1853, that they may have the third series from its commencement.

Address LUTHER TUCKER, *Albany, N. Y.*

MIXING GRASS SEEDS.—European farmers have long since found an advantage in mixing several kinds of grass seed together for seeding down, as they feed more or less differently from the soil, and at different depths, and yield more growth of herbage than one sort of grass alone. We think the practice has not been sufficiently adopted in this country. A late writer says he has adopted the following with beneficial results:—Ten pounds of red clover, five pounds of white clover, one peck of herd's grass (timothy), and half a bushel of red-top, followed by two bushels of plaster.

THE MICHIGAN DOUBLE PLOW.—We perceive that the *New England Farmer*, in consequence of too brief an explanation on our part, has entirely misunderstood our remarks in relation to the team required for this plow. Our experience in this matter gives precisely the same results as those found by the New England Farmer, with the exception, perhaps, that we think decidedly less draught required than for a common plow *cutting the same width and depth.*

A Michigan plow of a size corresponding with that of a common plow, will cut a furrow one-half deeper, or as three is to two, and consequently must run harder than the latter. For plowing nine or ten inches deep, two yoke of oxen or two pair of common horses are usually required; for one foot in depth, the largest size Michigan plow is needed, and must be drawn by three yoke of oxen.

For a given depth, we are satisfied the Michigan plow requires the least draught, in consequence of the inverted slice being composed of two distinct portions, which are more easily turned and thrown where they are to lie, than one thick, stiff, and unmanageable sod. At the same time the work is done in a far better manner, especially when the plowing is quite deep. It would, indeed, be next to impossible to plow a foot deep, and quite so to do the work well, with a single mouldboard.

Mr. JOSEPH HARRIS, who has been for the last year or two one of the editors of the Genesee Farmer, at Rochester, has become associated with Mr. MOORE, in the Rural New-Yorker Mr. H. has much experience as a practical farmer, and has had opportunities which few men in this country have enjoyed, of studying the science of agriculture. His labors will add much to the interest and usefulness of the paper with which he has now connected himself.

POULTRY EXHIBITION AT ALBANY.—The Utica Herald, in answer to a paragraph, as to the time when this exhibition will take place, says:—"We suppose we started the announcement of a Poultry Show, to be held at Albany on the 10th, 11th and 12th of January next; and we did it by authority of the officers of the State Poultry Association. They have since, however, changed the time to correspond with that of the Winter Exhibition of the State Agricultural Society. The Grand Poultry Show will accordingly take place at Albany, on Tuesday, Wednesday and Thursday, February 7th, 8th and 9th. This change of time has been deemed advisable, to accommodate those who shall wish to attend both the Agricultural and Poultry Exhibitions." This announcement, the Herald says, may be deemed authoritative and reliable.

A LARGE FARM.—We see it stated in the Ohio papers, that M. L. SULLIVANT, who we believe now owns the largest and most valuable farm in Ohio, has lately purchased *sixty thousand* acres of land in Lawrence county, Illinois, which he intends to convert into a stock farm, his men being already at work on the fencing and in making other improvements.

Return of Prof. Nash.—Our foreign correspondent, Prof. J. A. Nash, of Amherst College, has just returned from his foreign tour, having spent the past summer and autumn in a careful and thorough investigation of the systems and practice of agriculture as pursued by the best farmers of Great Britain. He also spent a brief period in France and Belgium; and he returns, with a better knowledge, probably, of the principles and practice which has given British agriculture so high a rank, than any American who has visited Europe. Our readers will have seen, from the letters we have already published, the view which he takes of the subject, and they will be glad to learn that he is to continue his series of Letters for the Country Gentleman for some months to come, from the notes which he made while abroad.

Mr. Thomas Gould, of Aurora, Cayuga co., has recently added to his fine herd of cattle, a very fine Devon bull, called "Holcomb," purchased of Lewis G. Morris, Esq., Fordham. The dam of Holcomb was imported from the Earl of Leicester, and his sire was the celebrated bull "Major," formerly owned by R. H. Van Rensselaer, of Otsego county.

Mr. A. J. Moses, of Champlain, Clinton co., returned home last week with a very superior Short-Horned bull calf, named "Oxford Lad," which took the first prize at the American Institute, purchased of Mr. Morris. He was sired by Lamartine—dam, imported "Oxford 5th."

Western Hort. Review.—This work, which was suspended a few months since, is to be resuscitated, under highly favorable circumstances. The first number of the new series will be issued on the first of January. Dr. J. A. Warder, Editor; J. W. Ward, ass'tnt editor; and H. W. Derby, publisher, Cincinnati. $3 per year.

Alderney Cows.—Mr. J. A. Taintor, of Hartford, Conn., has recently received two Alderney Cows from the Isle of Jersey. They are said to be very fine, one of them being a first prize cow, the past year, and the other, the previous year.

To Prevent "Winter-kill" in Animals.—Some of the papers give the following remedy, written "doctor-fashion": —

R.—Refug. opt. q. s.; Zea pulv. q. s.; Aq Fort. q. s.

The Zea to be applied as a poultice to the mucous membrane of the stomach. It will be needless to inform those skilled in learned prescriptions that this simply means good shelter, corn meal and pure water, and is very sound practice, although the crows denounce it as rank quackery, and a gross infringement on their rights and privileges.

Chloroforming Bees.—Some weeks ago, a correspondent of the New-Yorker objected to this mode of stupefying bees while removing the honey, stating that in an experiment of his the bees all went to sleep, but never awoke! Another correspondent thinks he used too much, adding that he succeeded admirably, by placing the hive for 25 minutes, on a cool autumn morning, over the chloroform, when the honey was cut out, the hive replaced, and by 12 o'clock all were lively as ever.

Correction.—The *Massachusetts Plowman*, in an article on the recent importations of cattle, speaks of one of Col. Morris' purchases in England, as having been made "for the New-York State Society." This is a mistake. Our State Ag. Society has never had occasion to import any domestic animals, all wants in this respect having been supplied by the public spirit of individual citizens.

Steuben County.—An Agricultural Society was formed in this county in June last, which held its first fair at Bath on the 13th and 14th of October, and the exhibition, both in quality and extent, exceeded the most sanguine expectations of its friends. We have been favored with a copy of the excellent address delivered on the occasion by the President, Hon. G. Denniston, from which we hope to be able to make some extracts hereafter.

Yale College.—We invite attention to the advertisement in this paper, in relation to the course of Lectures on Agricultural Chemistry in Yale College, by Prof. Porter, the successor of the late Prof. Norton. Prof. P. was for several years a pupil of Liebig, and has shown himself a competent and popular lecturer on Agricultural Chemistry.

Fish Ponds.—On the farm of the late Gideon Lee, near Geneva, N. Y., is a fish-pond of about two or three acres, nine feet deep, made by running an embankment across a small valley, and covering a marsh. Trees line it, water-grasses grow in it, and cattle are not allowed to disturb it. Some seven years ago, a dozen or two of trout were placed in it, since which time at least two thousand large and fine fish have been taken from it for the use of the family. A running stream prevents stagnancy.

Manure *vs.* Grain-selling.—Every good farmer knows that the more grain he uses to fatten stock, and the less he sells, the better for his land. The following figures show an improvement in this respect:—In 1851, over 6 millions of bushels of corn, and 10 millions pounds of bacon arrived at tide water from the west; in 1853, only about 2 millions of corn, and 19 millions of bacon.

Imported Stock.—The North British Agriculturist, in speaking of the fact that some of the finest animals were bought by Americans at the late English sales of improved cattle, says that the English bidders "succumbed before their trans-atlantic competitors," and did not bid nearly so high as the latter intended to have gone, adding, "It is not impossible that John Bull may one day require to cross the Atlantic, for some of the blood he is now allowing to leave England."

Yellow Butter in Winter.—We observe different expedients for this purpose, and among the rest, putting in the yolks of eggs just before the coagulation of the butter in churning. This may be good; but the best way we have found is, to put a peck of carrots—not into the churn, but—into the cow's stomach every morning and evening.

J. D. I., *Ilion, N. Y.*—"Breck's Book of Flowers," is probably as good a book on the subject as you can procure. Price, 75 cents.

C. T., *Uniontown, Pa.*—We know of no such mill as you inquire for.

Good and Bad Work.—A farmer, says Cole, dismissed a hand because, in his absence, he set only nine trees in a day. The farmer set out the remaining 91 of the hundred himself the next day. The result was, that the nine bore more fruit the first year of bearing than all the others.

Soft-Soaping Rabbits.—We are informed that the application of soft-soap to the trunks of fruit trees late in autumn, or in early winter, will effectually protect them from the attacks of rabbits. It is applied with a "swab."

Epitome of Farming.—Make plenty of manure; put it on plentifully, and then keep the ground clean—crop by rotation—underdrain when necessary, and plow deep where admissable—keep the best animals, sell or kill the worst, and keep all comfortable, well and regularly fed, and you will farm well and profitably.

Index to Good Farming.—An English agriculturist quotes the old proverb, "Wherever the foot of the sheep touches, the land is turned to gold," and adds, "Show me a man's turnep field, and I'll tell you what sort of a farmer he is." We may modify this for America, and say, "Show me a man's manure heap and corn field, and I'll tell you his character as a farmer."

Threshing in Winter.—A correspondent of the Michigan Farmer says that he bought, one year and a half ago, one of Emery's best Railway Powers and Threshers, for $165, and that it has already nearly paid for itself, in the following way. He set the machine on one corner of his large barn floor, and let it stand there during the winter. Every morning, before his boys went to school, they put the ponies on the machine, and in a few minutes threshed out 100 to 150 sheaves. This method gives the fresh straw daily ts his cattle, and by spring his grain is all threshed, when the machine is carefully put away.

South Downs for Mutton.—The Wool Grower knows a gentleman in England, who annually pays $264 for the use of a South-Down buck for three months, and this simply to raise sheep for the butcher. He keeps 400 breeding ewes, selecting 60 to 80 of the best for his hired buck, and thus greatly improves the whole flock.

☞ "Muscatine," an ox six years old, raised at Muscatine, Iowa, now *en route* for the World's Fair, is believed to be the largest ox in the United States. He is 6 feet 8 inches high, 17 feet and 4 inches long, girts 10 feet 9 inches, and if fatted, it is believed, would weigh over 4,000 pounds.

Borers and Grubs.

A correspondent of extensive experience makes the following remark:—"I have long known that *urine* protects apple, quince, and peach trees, against the worms that attack them near the ground; and some recent observations have induced the belief that a shovelful of fresh manure from the stable or hog-pen is equally efficacious. It both protects them, and nourishes."

How to Treat Trees received when the Ground is Frozen, or during Freezing Weather.—We occasionally hear of people being quite at a loss to know what to do with trees received in a cold time, or when the ground is frozen. The way is, either deposit the packages in a cellar as they are received, or open them and set the roots in earth until the weather changes: or a trench may be made in the open ground, even if the surface must be broken with a pick-axe, and the trees laid in until they can be planted. They may remain in this state quite safe all winter. Every season we receive packages of trees from Europe in mid winter, and we find no difficulty in taking care of them in this way.—*Horticulturist.*

The Way to Spoil Potatoes.—It is a little singular that many who are otherwise excellent cooks are ignorant of the rich, dry, mealy vegetables; theirs are invariably "soggy" and heavy as bread when the yeast is worthless. Their method of spoiling potatoes after they are well cooked is wonderfully simple. They place over the dish containing them, hot and smoking from the boiler, a *tight cover*, and keep it there—any one can do it, and eat water-logged potatoes in consequence. Better put their cover out of sight, even if the contents of the dish should cool a few minutes sooner on that account. Boiled potatoes intended for the table should not be covered a moment.—*Norwich Examiner.*

A Secret for a Farmer's Wife.—While the milking of your cows is going on, let your pans be placed in a kettle of boiling water. Turn the milk into one of the pans taken from the kettle, and cover the same with another of the hot pans, and proceed in the same manner with the whole mess of milk, and you will find that you have double the quantity of sweet and delicious butter. Try this, dairy women, and write us the results will you?—*Extract.*

Indian Meal Waffles.—Boil two cups of hominy very soft, add an equal quantity of sifted Indian meal, a tablespoonful of salt, half a teacup of butter, and three eggs, with milk sufficient to make a thin batter. Beat all well together, and bake in waffle irons. When eggs cannot be procured, yeast is a good substitute—put a spoonful in the batter, and let it stand an hour to rise.

To Roast Ducks.—Pick, draw and singe them. Cut off the head; dip the feet in boiling water to remove the yellow skin; truss them plump, turning the feet flat upon the back. Stuff the same as goose, and serve with gravy and apple-sauce. An hour will roast a duck.

Frosts.—The present season has been signalized by the occurrence of frosts in each month so far since the year began, with the possible exception of June. The one in July was not sufficiently intense to do any harm, but those which occurred about the 25th of August were so severe as to do a great amount of damage. In a late trip inland, we saw pieces of corn as thoroughly dried to appearance as in December. Other pieces seemed to suffer only partially, while the greater portion had escaped with little or no damage. Many fields of buckwheat also are entirely destroyed; while melon vines give unmistakeable signs of the blighting traces of the fingers of premature autumn.—*Prairie Farmer.*

THE CULTIVATOR.

THIRD To Improve the Soil and the Mind. SERIES.

Vol. II. ALBANY, FEBRUARY, 1854. No. II.

"We have Compassed this Mountain long enough."

THE object of the premiums offered by Agricultural Societies generally, is two-fold; first, to encourage the best kinds of farming, by rewards for the best crops, best implements, and the finest animals; and secondly to render the fairs so attractive by an assemblage of rare and interesting objects, that a large multitude may be induced to attend and pay the accustomed fee of admittance, to meet the expenses necessarily incurred. The real and sole object of an agricultural fair, should be to impart valuable information to the whole community—it should be a school of instruction in farming generally. What portion of the visitors attend for this object, and what portion merely to gratify a love of novelty and sight-seeing, we leave for our readers to decide. Certain it is that the managers of fairs have found it necessary to their pecuniary support, to make objects of mere show an essential portion of their exhibitions—in some instances they have perhaps become too much for show, even at the expense of what must always form a substantial basis for support, namely, lasting utility. So long however as the life-blood of agricultural societies consists in the fees paid by the multitude, we cannot object to the attraction created by the expected presence of Presidents and Governors, Politicians and Generals, for these will commonly bring together more of the farming community, than the finest animals, implements, and products in the world; and this will always be the case so long as farmers prefer political papers to agricultural journals. Our western friends have found another element of attraction, by displaying feats of horsewomanship through the stimulus of prizes, and so great has been the eagerness to see these brilliant exploits of female equestrians, that twenty-thousand persons were drawn together at a single county fair in Ohio the past autumn.

Such modes of attraction as we have mentioned, we believe may be admitted even by so grave and dignified an association as an Agricultural Society; but further than these we would not go, nor recommend the frivolity and idle amusements which have in a very few instances been connected with fairs, turning night into day, and setting a very bad example to farmers of steady habits,—who find no little trouble, in this flashy age, in retaining the affections of their sons and daughters for the quiet and real pleasures of home, instead of the gilded follies and hollow enjoyments commonly known under the name of "pleasure." Every thing connected with rural advancement, should contribute to a healthful and not to a vitiated taste, and when associations or periodicals cease to exercise such a salutary influence, it may be strongly questioned whether their best act would not be to cease to exist.

But enough of this. The principal object of our present remarks is to suggest a change in relation to the common mode of offering premiums. Agricultural societies, from their earliest existence, have traveled on nearly in one unvarying track. Premiums,—to stimulate the exhibition of rare objects; and the exhibition of rare objects that the people may be induced to come and see them. The premium lists of all are essentially the same. The best horses, the best cattle, the best sheep, and the best swine; the most promising looking plow, wheat-drill, threshing machine, and reaper; the largest collection of showy fruit, and the most laboriously wrought bedquilt and sewed flower-work. Now, some of these objects are most excellent; the introduction of fine animals, for example, to the myriads of farmers who would never have seen them but at such places, nor known of their existence, has conferred a benefit on the whole country that can be estimated only by millions. A similar influence has been exerted by the introduction of improved implements, and by other improvements.

A great field lies nearly unexplored, and farmers are thirsting for information, which these societies have as yet failed to furnish. We allude more particularly to systematic knowledge relative to cultivation, feeding, &c., which is only to be learned by experiment, carefully, scientifically and rationally conducted. The organization and support of agricultural societies require that a large portion of the present system of premiums be retained; but experiments, such as we have mentioned, have been almost wholly overlooked. A few premiums have been offered for such experiments, but they have brought out still fewer results. Premiums are an insufficient stimulus for their trial. Most men seem to have taken it for granted, without ever questioning the opinion, that premiums must be the great main-spring of all associated action. They will not answer for well conducted farm experiments, for there are very few that know how to perform them properly, that will do so with a mere *chance* of being paid for their services. Societies, if they expect to be useful, must mark out a series of experiments, and there are a few competent persons who would undertake them, from the interest they feel, at even less than the cost of carrying them out accurately in practice, when a *risk* would be no inducement. We do not see why agricultural societies should not aim to be useful in this way, as well as by the more indirect benefits of public shows.

It is scarcely necessary for us to mention instances; yet a few may seem to make our meaning plainer. The societies of this state have paid many thousand dollars for the finest looking cattle and horses. One-twentieth part of the fifty thousand dollars thus paid, would, if judiciously expended, have shown our farmers the comparative advantages of cut and uncut fodder; of feeding regularly and irregularly; of shelter and exposure; the nutritive value of hay and cornstalks, of wheat, oat, and rye straw, of cooked and uncooked food; the fattening properties of various grains, and of beets, turneps, rutabagas, parsnips and carrots; and would have shown which of the various breeds of cattle would furnish a hundred pounds of beef with the smallest amount of food; or which of the various competing kinds of swine would fill a pork barrel the cheapest. Now, we candidly ask, Would not a knowledge of all these facts be quite as useful to the great community of farmers, as the mere sight of the handsomest animals at our state and county fairs? Will societies continue the same tread-mill track as formerly?

Again—thousands have been given for large crops; the knowledge of which has had a stimulating effect on other cultivators. But the manure which produced them may have cost a large sum, and may be still too scarce an article to treat a whole farm with. Experiments therefore, showing the most economical mode of composting, applying and intermixing manures with the soil, would be of universal benefit. Indisputable facts, pointing out the best crop for green manure, and its value as compared with compost, and with other green crops, would be of the highest benefit. So also would a general system of experiments with various sorts of rotations, for determining the most valuable for the permanent benefit of the land, as well as for immediate profit. Again,—premiums are offered year after year, for the best twenty apples, and year after year the public see the twenty sorts set upon the tables for this standing reward. Infinitely more valuable to the community, would be the knowledge of the most productive sorts for market or for stock-feeding, proved so by actual experiment; or the knowledge between the product of orchards subjected to the best culture and treatment, when compared to those under ordinary neglect.

The great leading advantage of the knowledge obtained as we propose, over that imparted by ordinary fairs, is this: Fairs teach only actual spectators, and for a single occasion: that which we propose, may be published and laid before millions, and may be perpetuated for ages to come; and a single fact, well understood, may effect an annual saving of untold thousands when adopted by the great multitude of the farming community.

Answers to Inquiries.

Messrs. Editors—I take the liberty of making the following inquiries:

1. What is the best feed for milch cows in winter—the object is to sell milk?(*a*)

2. Can calves be raised partly on oil cake, the best method of using it, where is it to be had, and the cost?(*b*)

3. What would be the value of a two years old bull in the spring, three-fourths Ayrshire and one-fourth Durham, from imported stock, *handsome*, weighing over 1,000 lbs.?(*c*)

4. What is the price of draining tile? Can they be purchased in New-York?(*d*)

5. Are oyster shells valuable as a manure—if so, for what crop, and how are they to be used?(*e*)

My only excuse for thus troubling you is, that I am a reader of your valuable publication. R. Watson.
St. Stephen, New-Brunswick, Dec. 16, 1853.

(*a*) Avoid feeding dry substances *only*, and give a full proportion of succulent food, so as to imitate the nature of the succulent food of spring and summer, at which time milk is most abundant. Beets, carrots, and bran largely mixed with water, and warm quarters, will facilitate the production of milk. Milk-sellers inure their cows to the use of large quantities of "slop," consisting of water with small portions of meal, bran, &c., but when carried to excess the milk is thin in quality.

(*b*) We are not acquainted with the effects of oil-cake on calves. It is little used in this country. In Europe it is largely employed in fattening cattle in connexion with other food, and although very costly, it is found profitable from its valuable effects. American oil-cake is bought in England for this purpose. It must be crushed or ground before fed to animals. Our impression is that the price is about forty-five dollars per ton in New-York.

(*c*) The value cannot be given without seeing the animal—fine, full blooded animals, command good prices, for breeding. A mixture would greatly lessen the animal's value for this purpose, so long as full-bred animals may be had.

(*d*) Draining tile is made at Albany, Waterloo, and Palmyra, N. Y., and perhaps at other places. The prices vary with the size, from $10 to $18 per 1,000.

(*e*) Oyster shells, burned or pulverized, form a good manure wherever lime is beneficial. They are not so valuable as bones, being chiefly carbonate of lime. Crushed or ground, they are more fertilizing in their effects than common lime, on account of the animal matter they contain. Burned, they are nearly similar to pure stone lime. Experience is the best test of their value, under the varying circumstances of different localities.

The Michigan Plow.

Are these of such dimensions and construction that will do good work and not cut deeper than the common plow, say from five to eight inches, and for that depth would they be preferable to the common plow on smooth land free from stone; and where can they be had, and what is the price? Can they be drawn at that depth easily with three good horses? A Subscriber. *Easton, N. Y., Dec.*, 1853.

A principal object of the Michigan plow, is cutting *deeper* than with ordinary plows, burying the top sod under the mellower portion thrown up from below. If set to run only five inches deep, the forward mouldboard would not cut at all and would only encumber the implement. This plow will not work well at a less depth than eight inches. With this depth, three horses would draw the smaller size without difficulty. We believe it is kept for sale at the principal agricultural warehouses, at prices varying from nine to twelve dollars.

Destroying Sweet Flag.

Can you inform me the best way to kill sweet flag from low ground, as there is a good deal of it here on the best land. P. M. *Hopkinton, N. H.*

The roots of the sweet flag run near the surface, from which numerous fibres extend downwards; but these have no buds or eyes, and will throw up nothing if deprived of the surface growth. The best way to destroy the plant, therefore, where the ground is hard enough, or sufficiently drained to bear a team, is to get a *paring plow*, and run it just low enough to cut off the fibrous roots, and separate them from the surface. The sod is then cut up into blocks, drawn off, and may be used with much advantage in the compost heap. If the ground is too soft for plowing, a sharp spade will rapidly remove the surface roots, and completely extirpate the plant.

Plowing in Weeds, &c.

Will you do me the favor to state in your journal the best plow for turning in effectually fallow land grown up thickly in high grass and weeds, and crops of field Peas sown broadcast. Also the best method of preventing the growth of shoots from the trunks of fruit trees, near the ground. A Subscriber.

To plow in tall grass, weeds, or any other green crop, any good plow sold at the agricultural warehouses "for laying flat furrows" will be found best. There are so many patents or manufacturers in various localities, that it would be hard to name the best, but our opinion is that none better will be found than those of Ruggles, Nourse and Mason, of Boston and Worcester. In order to press the growth flat, just as the mouldboard begins to turn the sod, provide a stiff iron rod, to pass through a hole in the beam just forward of the coulter, and extending downwards and backwards, parallel to the mouldboard, until about one foot to the right of the beam, and just sweeping the surface of the ground. This serves to bend over the tall vegetable growth, *from* the mouldboard, so that when the sod is thrown over, the growth is all turned under, and no portion will project from the upper edge of the sod. A round iron rod, costing not over twenty-five cents, may be easily bent to the proper shape, and inserted into an auger hole bored through the beam, and fastened by iron wedges. In the absence of any contrivance of this sort, or on a very uneven surface, harrowing down the weeds in the direction the plow is to run, will much assist the operation.

The only way to prevent the growth of the shoots spoken of, is to cut or pull them off as soon as they appear. If cut, they must be pared off *even with the surface*. If a few months old, they may be easily pulled off, by holding the ends with the hand, and then pressing down on them near the trunk of the tree with the foot.

Theories and Experience.

L. Tucker, Esq.—I feel much pleasure in bearing witness to the great ability with which the Country Gentleman is conducted, and that it comes up to my conceptions of what an Agricultural paper should be, by practical instruction as to the best methods of farming, and literary and miscellaneous matter for the improvement of the mind; and most happy am I to see you steer clear, so skillfully, of the conceits, notions, and theorics which most agricultural editors administer ad nauseum. Theory may build an apparently impregnable structure, but when unsustained by experiment, adaptedness and fitness to our wants, it falls to pieces like the baseless fabric of a vision. How many such have been hatched in the heated brains of chemists, philosophers and fancy farmers, and our whole agricultural community denounced as a set of blockheads because they could not be induced to eschew all their hard bought experience and hail with joy the advent of some glorious discovery which was about to place us soon again within the walls of Eden. The transplanting of European ideas and practices, without reference to difference in soil, climate and circumstances, is a fearful source of error of this description. In most cases the instinctive perceptions of our farmers, like the test-paper of the chemist, is more reliable in practical questions than the most carefully educed proposition of the man of science. Of these some maintain that humus is insoluble, and consequently innutritious; others that *all* vegetable substances should be converted into the state of humus before being applied; some that all manures should be *thoroughly* fermented; others that they should be fermented at the roots of the growing crop; some that all vegetable and animal manures are worthless for purposes of nutrition; others that the atmosphere is the great and only store-house of vegetable life; some that mineral applications are merely stimulants, tending towards the eventual exhaustion of the elements of fertility; others that mineral substances enter into and constitute a part of the vegetable as truly and essentially as carbon itself does As the lawyers say, the books are full to the same effect. The farmer, in the midst of these discrepancies of the doctors, winks his eye, and says, "possibly you are all right under certain circumstances, and until you settle the question among yourselves, I will practice upon the results of *my* scientific investigations, viz. that all animal and vegetable and mineral applications, fermented and unfermented, improve my crops, and after that the atmosphere—aye, and the moon and the planets, may have their chance at them afterwards."

I am far from wishing to throw philosophy and chemistry to the dogs; but would only inculcate a little more modesty in the setting forth of their claims. After science has applied her tests, let practice and experience apply theirs, and thus may the two branches walk lovingly side by side, like two gracious, good-humored Durhams beneath the yoke, pulling together for the public good. Unfortunately for the advance of true science, some of the magi have assumed the philosophic look and title—mounted the knowing specks upon their nasal organ—donned the broad-brimmed beaver of simplicity, indued themselves with the ample vesture of antique mysticism, and intimate confidentially (through their advertisements) that they and only they have discovered the great catholicon; and thus delude and disgust those intelligent and enterprising minds that would apply the results of science to practical agriculture. In all the mechanical branches, the results of science are fixed, absolute and certain; they are demonstrable—like causes will produce like results—but in reference to agriculture the case is different. The vital principle of plants has laws peculiarly its own, which have as yet in a great measure eluded the grasp of science. As, for instance, who of the learned ones can give us a satisfactory explanation of the effects produced on vegetation by a slight sprinkling of gypsum, or an application of lime, ashes, guano, phosphates, &c. They can tell us of the effects, but can they give us the rationale? Can they even agree among themselves as touching that great and important question, viz. in what form are the above, and all other nutritious substances, animal and vegetable, introduced into the organs of plants? By mechanical or by chemical solution? or whence and by what organs do they obtain their gaseous constituents from the air—through their leaves or by their roots, from the atmospheric air mixed with the earth, or do they decompose the water absorbed through the roots, as well as the substances which the water has introduced into them in a soluble state? I know the doctors will say the rationale of these cases is very simple—but then each one has his theory, and no two can agree. There has been entirely too much theoretical "chemistry as applied to agriculture," but I have reason to hope "there is a better time coming." I see that Professor Johnston, in his valuable work, has rigidly returned to the old Baconian system of making experiments, recording facts, and from these facts deducing general laws. By carefully conducted experiments upon the plants and crops themselves, he asks nature herself what her laws are, and he modestly records her answers in form of results.

It is high time another popular illusion were dispelled. In all the profound dissertations upon the noble art of farming, and in the oratorical displays before agricultural societies, and proposed systems for agricultural schools, the great and important requisite for the successful farmer is said to be a knowledge of chemistry. This is all wrong. Our cause is only damaged by vain pretensions and assumptions, erroneous in fact and in principle. It is an accomplishment, and a great satisfaction to know what is known in reference to the laws of chemical affinity and combination. All persons who can, should make themselves acquainted with this most interesting branch of knowledge, in order to widen his scope of vision, but that he should be induced to enter into the mysteries of this science with a *view* to greater success in his calling, is grossly erroneoas. The farmer's business is with results; that of the chemist is with the process; and with the latter may as well be left both process and result, so far as *practice* is concerned, until something more definite is arrived at. I might ask the question, what great or important discovery has chemistry brought to the aid of the practical farmer? but for fear the question may be deemed malicious or impertinent, I withdraw it. G. E. H. *Near Brownsville, Pa.*

Cultivation of Indian Corn.

Malone, December 21, 1853.

L. Tucker, Esq:—Being an attentive and constant reader of your inestimably valuable paper, I have of late become much interested in the remarks and communications upon a variety of subjects, but more especially upon raising corn, salting hay, and the dairy business; and since you are in the practice of giving communications a corner of your paper, and as I conceive it to be of the most beneficial consequence to practical agriculturists, to have the benefit of the experience of the fraternity, I take the liberty of forwarding the following facts to you, hoping you will make such use of them as circumstances warrant.

Raising corn has always been, and still continues to be, one of the most extensive operations of the agriculturists of this country. We perceive by examining into the circumstances of the case, that there is an astonishing amount of capital invested in this one branch of farming, and that the common profits are exceedingly small, compared with favored fields, in favorable localities. This is the subject which appears to be before the public, and its remedy requires the consideration of practical farmers.

There are several causes which directly or indirectly tend to produce this common effect, among which may be enumerated soil, tillage, seed, &c. Large crops are raised on all kinds of land in favorable seasons; yet the risk is so great that experienced farmers seldom trust their capital in this lottery; but rather take land of a light, warm nature, that is easily tilled, and can be made productive by manuring, and is sure with proper care to produce a remunerating harvest. I consider a sand or gravely loam most suitable and profitable, though most soils can, by a thorough draining and subsoiling, be made to produce good crops of corn.

After many experiments I have adopted the following mode of operating. Take land that has been in sward two years; break with flat furrow as deep as convenient, late in autumn before the severe frosts injure the vegetable matter; let it settle till planting season and then harrow until mellow. Be sure to harrow enough, for there is no fear of working the soil too much, and few think that one day's work in spring will save four at hoeing time. Mark both ways with a marker which will make four marks three and a half feet apart; be careful to go straight, so that you can do your hoeing with a cultivator. Plant in intersections, after putting one spoonful of gypsum in each hill. Plant good seed, and no more than you wish to grow. This will save a vast amount of bending while hoeing. At first hoeing, put a small handful of ashes on each hill; hoe two or three times as circumstances require, and you are sure of a good growth. I find that the plaster increases the product fifty per cent., or more, which is a better dividend than all the railroads, banks, manufacturing or mining companies in the Union pay.

I harvest by cutting near the ground, and putting in small stooks before fully ripe, where it is left until cured. The stalks, if harvested in this manner, will half pay the expense of the crop; and are eagerly devoured by most kinds of stock. I find them to be the best feed ever used for cows. Butter made while feeding them, is always of a beautiful color, and an excellent flavor.

Under this treatment, I have always succeeded in obtaining a remunerating harvest, while some of my neighbors often do not get corn enough to pay expenses; and when they are informed of the beneficial results arising from the use of plaster and ashes, they say they cannot afford to pay for ground stone to throw away, and that they do not believe in book farming. Yours truly, FRANK PARLIN.

Self-Sharpening Yankee Feed Cutter.

EDITORS COUNTRY GENTLEMAN—In number 49 of your paper, you say, in answer to a correspondent, that "a cheap and perfect straw cutter has not yet been made." Will you allow me to present to your notice a machine of that kind, which, although it may not be quite perfect, yet I am convinced, from thorough trial, is as near perfection as any cutter ever made. It works on an entirely different principle, so far as I can learn, from any now in use, and is vastly superior in simplicity, economy, ease of working, and—what will be a great recommendation to most farmers—ease of keeping in repair. The chief point of difference is this: it has only one knife, and that is stationary. It is placed horizontally at the end of the feeding-box; and the cutting is performed by two sets of spiral flanges, above and below the knife, drawing the hay, straw or cornstalks up to and against the knife. And here is an important difference. Instead of cutting *perpendicularly* to the grain of the straw (so to speak) as the common hide-roller cutters do, the flanges being spiral, the cut is made with a *shearing* motion, thus cutting with much greater ease. It is known, I believe, as "The Self-Sharpening Yankee Feed Cutter," from its tendency to keep the knife sharp all the time; the effect being the same as in honing a razor, edge forwards, the flanges doing here what the hone does in the case of a razor. I believe quite a number of different sizes are manufactured, of all prices, from $6 up to $17, and to cut from half an inch, upwards. The larger sizes, being very powerful machines, are peculiarly adapted to the cutting of cornstalks, (which will yet be the farmer's great dependance for winter fodder,) being cut and steamed, when they are very nutritious. From the peculiar position of the knife, the stalks are not only cut into small pieces, but are also *split*. I have never found any other machine which will at all compete with this in all the particulars above mentioned. It was patented by A. S. MACOMBER, and is now manufactured considerably in Massachusetts and Connecticut, a joint stock company having purchased the right for the latter State, and the counties of New-York along the Hudson river. I have been informed by a friend who owns one of the larger sizes, that he has cut up corn on the ear with it, so that it could be easily ground without cracking. My own machine, though of rather small size, will easily and rapidly cut up middling sized stalks, and I am so well pleased with it that I shall not use any other kind hereafter. Another great advantage of this kind is, that the knife need never be taken from its place to be ground. By simply putting some flour of emery and oil on the edge of the flanges and turning them backwards, the knife is ground up as good as new. I hope you will excuse this long letter; but if I can benefit my brother farmers by bringing to their notice any labor-saving machine like this, I shall be abundantly satisfied. A SUBSCRIBER WHO HAS TRIED. *Birmingham, Conn.*

Information Wanted.

MESSRS. EDITORS—In the December number of the Cultivator, page 168, I find a very interesting and satisfactory account of an experiment in the application of different kinds of manure to the raising of Indian corn, by H. H. EASTMAN, Marshall, Oneida co., N. Y., and would like, through you, or some of your numerous readers, to learn further upon the same and similar subjects. And, first, can Indian corn be raised with any of the manures named in the above experiment, (barnyard manure excepted,) with success, and at the *same time so improve the soil as to prepare it for oats, grass, &c.? If so, which kinds, what quantities of each, and how applied?*

2d. Can any of the manures alluded to above be used with success on pastures or mowings? and if so, please name the kinds, the quantity needed, the season most favorable for the application, and how often is it necessary to repeat the top-dressing?

3d. Can either kind of the manures alluded to, be profitably used as a top-dressing on reclaimed swamp or muck lands now in mowing? If any can be so used, which kinds, and in what quantities, and at what season of the year?

In communicating through the Cultivator the experience of yourself, or some of your readers, on the above points, you will doubtless gratify many, and much oblige one who wishes to convert the waste and barren into fruitful fields. S. DEMING. *Farmington, Ct., Dec.*, 1853.

We hope some of our readers who have experience in the matter, will reply to the above inquiries.

Fall and Winter Plowing.

It seems not a little surprising, that there should be so many farmers, in this age of intelligence, who will, so strenuously, insist upon the inexpediency of fall or winter plowing. It would seem, that after a few successful experiments in fall plowing, every farmer would be not only ready, but *in haste*, to avail himself of the great benefits of plowing deep in the fall. But we find a great number, who have come, deliberately, to the conclusion, that they do not get as good crops from those fields which were plowed in the fall as from those which are plowed only in the spring. Many contend that when land is plowed in the fall, (especially sward land,) the crop, especially if it be corn, will be very much injured, the ensuing year, by the worms. Others say that they have experimented in fall plowing, and have become satisfied that they do not get as good crops as from spring plowing only

We grant, in a measure, the truthfulness of both these objections; but at the same time we would advocate late fall plowing, except when the soil is very sandy, or a sandy loam. It is true that there are soils which it would not be well to plow in the fall, on account of their disposition to leech. After a farmer finds, by a few fair experiments, on such soils, that he obtains greater crops from spring plowing *only*, than from fall or winter plowing, the practice should be abandoned at once On very porous, light, sandy soils, on gravelly loams, and all other kinds of soil which are not accustomed to bake, and to become lumpy, the rains and snow and frosts of winter have no ameliorating effect; because, if we increase their porosity and friability, it is done at the hazard of their fertility.

The grand object to be attained in fall or winter plowing is, to increase the friability and porosity of soils, and to destroy the worms. If the soil is already very porous and friable, there is too much reason for apprehending that much of the elements of fertility will be washed out by drenching rains; and thus the soil would be impoverished rather than made more fertile. But, generally speaking, all soils that are apt to be lumpy when they are plowed, (it is taken for granted that there is not an excess of moisture,) and inclined to bake in spring and summer, clayey loams, calcareous soils, and thin soils of muck lying on a subsoil of clayey loam and gravelly clay, will be greatly benefited by being turned up to the influence of the rains and frosts of winter. If a soil has been thoroughly drained, but is very wet from heavy rains, we need entertain no fears that fall plowing will injure it; because, should it be so wet as to run together like mortar, the rains and frosts will destroy this cohesion. But if a soil is not thoroughly drained, we need expect no benefit to result from plowing such soils in the fall or winter; for if we expect it, we will surely be disappointed. I will tell why. A soil that is thoroughly saturated with water will expand but little if any more than the same bulk of water when it congeals; and when it thaws much of the finer particles run together like lime and sand and loam when they are made into mortar, holding in this mass the elements of fertility so firmly that as food for plants, they are in an unavailable state. But when a soil that is only moistened, freezes, its bulk is greatly increased, and the cohesion of every part is affected; and when it thaws, there being not water enough to allow the different particles to run or settle together, it remains light and friable like honey-comb; and each successive freezing increases its porosity and breaks up this coarseness of particles.

In order to illustrate this subject, let any one take some unslacked lime and wet it just enough to make it slack well; and it will afford a beautiful example of the effect of rain and frost on a dry soil that has been plowed in the winter. Now take another quantity of lime and continue to pour on water, more than is necessary to slack it; and after it is slacked, stir it with a stick and let it settle. Now let the water evaporate, and let the lime freeze and thaw, and we are furnished with a very correct idea of the effect which fall or winter plowing has on a soil that has an excess of moisture.

When a soil is plowed early in autumn, if there are many worms in it there is danger that they will seriously injure the crop the following season. But if the plowing is deferred until late in autumn, or even until winter, a great majority of them will perish after being routed from their winter quarters. And, furthermore, when sward land is plowed early in autumn the grass roots, on which the worms would have fed while the crop is growing, will have decayed long before the crop on the following season is out of danger from the worms. But if land be plowed late in autumn or winter, the grass roots undergo but little change, and will furnish food for worms as well as if the soil had been plowed in the spring. I have known many crops materially injured by the worms in consequence of plowing too early in autumn. A few years since a neighbor cut a ditch through one of his pastures in the month of September, and on the following season plowed in the spring and planted with corn. Along this ditch, a strip about six or eight feet wide was almost entirely destroyed by worms, while the rest of the field yielded a bountiful crop.

Another objection might be advanced against plowing in early autumn, which seems rather plausible, especially if it be any kind of stubble, and not sward. Heavy rains and sometimes snow falls abundantly, which settle and pack the soil so closely together that freezing and thawing has little if any more effect on it than if it had not been plowed. But had the plowing been deferred until these heavy rains had fallen, the soil would present a much larger surface for the frost to act upon.

Another very important consideration is, *the manner in which the plowing is performed.*

Every good plowman knows that there are three kinds of plowing, viz: *round plowing*, *flat plowing*, *and lap plowing*. (I do not intend to speak of the different modes of turning the furrow in this place, but simply to show the different effect of different kinds of plowing in the fall or winter.) Sward land, on undulating and hilly regions, whatever the soil may be, should not be plowed in autumn or winter with a lap furrow. On level land it will do better; but even there the lap furrow is wholly objectionable. By plowing with a lap furrow where there is a stiff sod, the soil is laid in a position to carry off effectually all the elements of fertility which find their way into the subterranean drains formed by lapping one furrow on another when the land is hilly; and when the land is level too much of the fertilizing substance in the soil is apt to leech into the sub-soil, especially if it be a leechy soil. It is far more advisable to turn flat furrows in fall and winter plowing than to lap them. But flat plowing is decidedly objectionable, because the soil is not sufficiently pulverized. Generally speaking, when furrows are turned flat, the cohesion of the soil is not half broken up; and although the furrow may appear to be broken up, as it turns on the plow, still, all the cracks will close, after the furrow slice leaves the plow; and the soil will be but little better, so far as its porosity is concerned, than if it had not been plowed. Simply inverting the soil to the depth of five or six inches, in one unbroken mass, as we would turn over a plank, thinking that the rains and frost will render it sufficiently porous and friable, is a wrong idea. The plow must not only turn the furrow upside down, but it should destroy entirely the square form and unbroken compactness of the furrow slice. Then the rain and frost will be able to effect its pulverization in the most desirable and perfect manner. By plowing with a plow that turns a round or convex furrow slice, the ground is prepared for the rain and frost to perform their office. By plowing with lap or flat furrows, we leave a task for the frost and rain which they are unable to perform, which the plow should have done, and then wonder why the result should be so different from what we anticipated. By turning the furrow with a plow that rolls a thin sod together and encircles it completely with well pulverized super soil and sub-soil on all sides to the depth of three or four inches, the soil is prepared in the most perfect manner possible for rain and frost to perform their work, and to preclude the risk of the elements of fertility being washed away by drenching rains.

When sod ground is plowed in the fall or winter we do not expect to plow it again in the spring, and therefore, as a security against worms, the latter part of November, or in December, January or February, if the ground is not frozen, is as good a time as autumn. In December, 1852, I plowed a field for corn, with round furrow slice, and to the depth of ten to fourteen inches; and although snow covered the ground of most of it to the depth of three and four inches while I was plowing, the operation was so well performed that a friend of mine, one week after the work was done, thought it appeared more like a summer fallow that had just been cross-plowed than like sod. Although the worms were numerous in the soil, thousands were seen perished in the cold. Their winter retreat was broken up, and I lost but a few hills of corn by them. S. Edwards Todd. *Lake Ridge, Tompkins co., N. Y.*

Raising Poultry.

Editors Co. Gentleman:—As raising poultry is becoming a matter of considerable interest, I send you a few remarks on my experience, and some calculations which I have made, thinking they might be interesting to those who like myself have had an attack of the *chicken fever*.

I have often heard it said that it was more profitable to *sell eggs* than to raise chickens. I did not think so; but to prove the matter, I kept an account the past season of every egg set and hatched. The following is the result:

Eggs set	704
Chickens hatched	457
do. raised	169

I consider that I had very "bad luck" in raising so few. It was not entirely owing to bad management, although I now see where I made several mistakes. I had so many difficulties to contend with—the hawks, crows, hogs, rats, &c—each and all took a large share, and yet had the eggs been sold the average price would not have been more than 14 cents per doz., which would have amounted to $8,21 cts., whereas I have sold 88 chickens for 30 dollars—used in the family and given away 45, and have 36 left.

No account was kept of the feed because those used in the family, would considerably more than have paid for that, had the "almighty dollar" been the entire object. Chickens pick up a great deal that would otherwise be wasted on a farm, and any one living in the country knows what a satisfaction it is to have plenty of chickens and eggs of one's own raising. I intend keeping half the number of hens and a like account the present season, hoping it may show a better result. A Reader. *Maryland, December*, 1853.

Composition Roofs.

In answer to an inquiry of a correspondent, relative to this kind of roof, the best information we can give is furnished by the Prairie Farmer. His mode of roofing, it appears, has been extensively used in some of the western cities, and after a trial of several years, appears to possess every element of durability. These roofs are cheaper than tin-plate, and rather dearer than good shingles, being $5 to $6 per 100 feet.

The Prairie Farmer thinks this roofing should be applied only by those who make it a business, as there are several requisites for the permanent success, not at the command of every one. A thick, coarse paper, made of wollen rags, expressly for this purpose, is saturated with coal tar, or with turpentine, and is then made to cover the boards of the roof, which are laid on as for common shingling. Some operators fasten the paper on various parts of the roof, and others only at the edges, the latter alledging that the contraction and expansion of the boards, in dry and damp weather, injures after a time the texture of the paper, if it is made fast all over. When the paper is properly secured, a composition made of coal tar, thickened as is supposed by rosin or pitch (the operators feigning secrecy) is then applied hot with a swab, immediately after which, sifted sand is spread over as thickly as the composition will hold. This is rolled, and another application of the composition made, followed by a coating of gravel. Some operators apply but one coat of composition, and a coat of gravel only. *Steep* roofs cannot be covered in this way—one foot in four or five being barely sufficient to retain the melted composition.

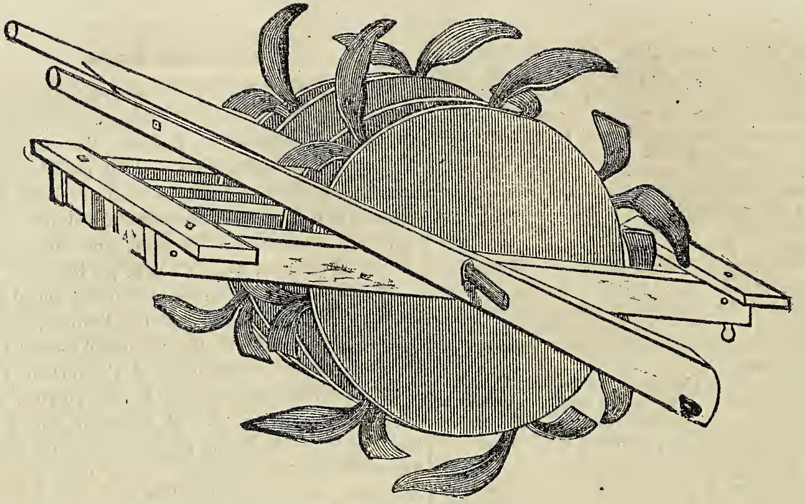
Lime on Corn.

I have just concluded an experiment with lime on a field of corn, which may be worthy of notice. As the corn was coming up, I applied about half a pint of slaked lime to each hill, with the exception of four rows near the middle of the field, which were left, that I might see whether or no liming in the hill was beneficial to the crop. The after treatment was the same during the season.

Harvested separately the four rows unlimed, and also adjoining them four that were limed, (soil and situation being precisely the same,) and the result was an increase of a little over one-eighth in the amount of corn in favor of that which was limed. R. F. Bingham. *Ellsworth, Mahoning co., Ohio.*

P. S. To prevent crows and black birds pulling up corn: Keep a good supply of it scattered on the ground for them to eat, as they won't work for a living if they can get it without. I have tried it with success for several years.

"Old Colony Sweet Corn."—I tried the "Old Colony sweet corn" last summer. The experiment was a fair one, and made under the most favorable circumstances. It is, in my opinion, far inferior both in quantity and quality to the common sugar corn cultivated in this vicinity. If it does not succeed better on another trial, I shall consider it a *hoax*. T. G. *Delaware co., Pa.*



GIBBS' ROTARY SPADE.

Gibbs' Rotary Spade.

This implement is designed to serve the same purpose as Samuelson's Digging Machine, and is more simple in its construction. The Rotary Spade is the invention of Mr. L. H. Gibbs, of Washington, D. C., and is now exhibiting at the Crystal Palace. It is composed of two cast-iron circular plates, about two inches apart, and working between them are eight stout, narrow wrought-iron teeth, curved somewhat like the old-fashioned cultivator teeth. These teeth are hung, and have a trigger to throw them out as the machine revolves. A yoke of oxen are sufficient to draw the machine, and as it progresses each tooth in succession is pressed into the earth by the weight of the machine, and, when the weight falls upon the trigger, the tooth is thrown out with its load of earth, which is thus mixed and pulverized as thoroughly as if forked over. The two wheels cut a furrow about two feet wide and nine inches deep, which can be increased to any desired width and depth. It requires no holding, yet is provided with handles so fixed as to throw the machine out of the ground.

The cut which we take from the Peoples' Journal, is an accurate representation of the implement. Now that the importance of fine tilth is so generally understood, the advantage of an implement of this sort will be readily seen. Where land has been plowed in the fall, preparatory to spring sowing or planting, the Rotary Spade passed over the ground in the spring would put the soil in fine condition for a crop.

Valparaiso Squash.

Messrs. Editors:—I raised a notable quantity of Valparaiso Squash, last season, on a small piece of ground—I should think half a ton's weight from eight or ten hills. They grow to a large size, as the specimens on exhibition at the different County and State Fairs abundantly prove. My hogs fed upon them with great avidity, and as they are obviously a more nutritious kind of food for stock than pumpkins, I have been induced to believe they might be substituted for the latter in field cultivation, to advantage. With suitable care they must be very much more productive, and of richer flavor, as they are without doubt. It seems to me that Squashes are to be preferred to the old Conneticut staple. For culinary purposes there is no comparision between the two. I do not mean that Squashes can be planted among corn, where pumpkins never should be if there is a good stand; doubtless it would be necessary to give them full and exclusive possesion. I think I shall make a trial next year of a field crop of this species of Squash, and may communicate the result, if any of your readers should feel interested therein. V. W. *Dec.*, 1853.

Shell Marl, &c.

What is the comparative value of shell marl as a fertilizer after having been exposed to the air and frost one season, in comparison with the same bulk of ashes, lime, muck, poudrette or super-phosphate of lime, or compost?

Where can Woodbury's corn and plaster drill planter be obtained, and what is the price?

Is sulphate of soda (glauber salts) of any practical utility, and economical, mixed with ashes as a fertilizer? An answer to these questions will much oblige H. S. *Felchville, Vermont.*

Shell marl is about the same in character and effect as lime, where the two are in a condition to be equally intermixed with the soil. Exposure to the frost of a winter does not effect shell marl, except it may in some instances render the marl more friable, and consequently better for even application and thorough intermixture. It is difficult to compare its value to that of other manure, as without other fertilizers, it would be of no value, and its effect would not be felt on soils already well supplied with lime. On the other hand in extreme caes, and where circumstances have been most favorable, it has doubled the product of the land. The best way to ascertain its value, is to try a few experiments on a moderate scale.

Nearly the same remarks will apply to ashes, muck, and superphosphate of lime. Ashes, however, containing *all* the *earthy* parts of plants, are more generally beneficial than earthy manures of more limited composition, but lacking ammonia they scarcely ever produce any striking effect. Muck is very useful on such soils as are not well supplied with vegetable matter, but is of no value on those that are. Under favorable circumstances, which are best determined by experiment, superphosphate of lime produces very powerful effects, many times greater than any of the other manures mentioned. Glauber salt has never been tried extensively; in a few instances it has been found beneficial, but far less so than most other fertilizers, and sometimes injurious. *As a general rule, all these single fertilizers are more useful and more certain when mixed with common manure*; because plants have *many wants*, and no one substance alone can supply them; but ordinary manure, consisting of several ingredients, and more especially ammonia, these substances act in concert and they assist each other.

Poudrette and compost are complete manures in themselves, and of course their value must depend on the amount of peat, earth, &c., which enter into their composition. The best poudrette is several times stronger than ordinary compost, but the poudrette of commerce is greatly diversified in its composition, so that it is hard to say without actual trial or analysis, what its real value may be.

We do not know where Woodbury's drill can be had.

Raising and Harvesting Timothy, &c.

Messrs. Editors—In your paper I often read questions such as these—best time to put in timothy, how to put it in, how much seed to the acre, when to cut it, and how to cure—1st. Any time between the middle of September and the middle of October. I have raised good meadow by sowing the latter part of November. 2d. I never sow less than half a bushel of seed to the acre. 3d. I cut when the blossom is about to fall. 4th. What grass is cut in the morning, I turn over after dinner, provided the weather is fine with plenty of sun; if not I let it lay until the next morning or longer if the weather is not suitable. I will tell you how I do, if the weather is good. The next morning when the dew is off, I rake up into winrows that which was turned over the day before; after dinner I put it into cocks, say from 150 to 200 lbs in a cock; the next morning I open them and after dinner I stack it, or haul it in the barn.

I put in grass seed after oats or wheat; never sow any thing with it, I have found out to my own satisfaction, that it does better put in by itself. I sow no other kind of seed but timothy, as it brings the best price here. I plow my ground but once, 6 to 7 inches deep; harrow it once or twice according as it needs it, sow my grass seed and roll it in.

I should add that I generally cut a first rate crop of grass the first season after the seed is sown, from 1¾ to 2 tons to the acre. I then let it lay 3 years and plow it up—put the land in with what you please; I put in corn the first year, then oats, and then grass seed again.

Farm Roller—How Made.—By the bye I will tell you how I made my roller. In the first place I take a piece of scantling, 4 x 4, 9 feet long—I use yellow pine—then I make 3 wheels 3 feet 2 inches in diameter out of 2 inch plank, two of them being doubled over on each end of the shaft I spoke of above, which shaft protrudes past the wheels at each end 3 inches—the 3 inches made round and a band drove on—2 iron gudgeons made a foot long, square 1¼ iron, 2 inches made round for the frame to set on. The single wheel is put in the centre of the shaft. Through the wheels I make my mortices square. Now for the covering of the wheels. I take 2 inch stuff 4 inches wide, and nail it on strongly; then over each end I put a good heavy iron hoop, 2 inches wide. This is what I call a first-rate roller, 8 feet 6 inches long, 3 feet 6 inches in diameter. As for the frame, there is no use of me dersribing that, as no man should be a farmer that does not know how to make one.

Boiling Feed for Animals.—I often read about grinding food for stock. I boil mine. I have a 50 gallon kettle set in an arch in which I put my corn (in the ear) and boil it until it is soft, and the way my animals thrive on it and good timothy is a caution, and ought to make dry corn feeders blush. It is much better than feeding raw ground corn. Eight ears of this will do an animal more good than 12 unboiled. There is nothing better to make a cow give good rich milk. John L. Moore. *Cottage Farm, Quincy, Ill., Dec.* 22, 1853.

Apple-Tree Hedges.

An esteemed correspondent at Bloomingburg furnishes us a sketch and description of a hedge, or rather a fence made by planting apple-trees two feet apart, and uniting the side branches, as we understand, with an operation like inarching, at a height of about three feet from the ground. The trees, being grafted, are intended for bearing fruit. Our correspondent thinks this fence, which he has now growing, will form a permanent fence in a few years. If this plan should succeed after a full trial, we should be glad to hear further from it; but our impression is that the unnatural position, and thick growth of the trunks, will be unfavorable to the health and thriftiness of the branches, as the trees grow older. For a simple screen, we would greatly prefer the privet or buckthorn, or arbor vitæ or hemlock for an evergreen screen. For a real substantial hedge to exclude beasts and boys, we have from present knowledge, more confidence in the Osage orange than any other hedge-plant, for the middle, western and northern states, except at the extreme north.

☞ Mr. W. T. Wallard, of Castine, Dark Co., O., the last week purchased a very fine four year old Ayrshire cow of E. P. Prentice, Esq., of Mount Hope, near this city.

A Reform Needed.

The time has been when the farmer's life has been regarded as almost an insuperable bar to respectability, by certain broad-cloth and kid glove devotees. Hence the reason that ambitious farmers' sons so frequently sought "learned professions," (although we regard agriculture properly understood as the most learned of all,) in order that they might be enabled the better to become fine gentlemen. We think farmers have been partly to blame for the prevalence of this feeling. They have not attended sufficiently to the cultivation of rural taste, nor even to personal cleanliness—they have not studied to make their homes pleasant and attractive by ornamental planting—gardening—fruit raising—by neat and well-furnished dwellings, well provided with literary and scientific food; and if any of them have aimed higher than the common level, they have rather sought for splendid emptiness, than compact comfort. No class of persons have such ample resources at hand for the beau ideal of cheap and real domestic enjoyment, as the rural resident.

There is however one great drawback on the comforts and attractions of country life, in the labor and drudgery to which farmers' wives are generally subjected. The occupant of the one to three hundred acre farm, must hire from two to ten men, and the farmer thinks it cheapest to board and lodge them in his family. There are some men of this class who are neat and respectable; but the great mass of "hired men" give little attention either to cleanliness or mental cultivation. In the evenings, the intervals during the day or meal times, and often on the Sabbaths, the house is largely occupied by these hired men, and the owner and his wife, with their young children, or with their grown up daughters, have no seclusion whatever for conversation, study, or writing, for it is next to impossible to prevent in ordinary farm-houses a pretty thorough intermixture of individuals of all sorts and sizes. This evil falls heaviest on the female part of the farmer's family,—for besides the inconvenience to which they are subjected by this unwelcome occupance of the house, there is a still greater inconvenience in the amount of drudgery which they are compelled to perform, in providing food for so large and hungry a family. There are many farmers' wives and daughters, well provided with property, whose time is wholly and closely occupied from the earliest dawn of every morning till long after dark, with a constant and laborious round of baking, and boiling, and stewing, and roasting—washing, scrubbing, and so forth, besides the large supplies which must be laid in far in advance for so heavy a consumption, in the shape of lard, candles, soap, dried apples, butter, sausages, and many things else to make slaves of women. It is no wonder that we so often see such women bent down and furrowed with premature old age, while the merchant's and mechanic's wives, and the city resident, at the same period of life, remain straight, vigorous, blooming, and active. We have heard a most worthy and intelligent woman, who at fifty, looked old enough for seventy, remark that at a fair estimate she had cooked at least fifty tons of food for laboring men. No wonder the town ladies regard it as a sort of state-prison punishment to be compelled to marry young farmers.

Now, what is the remedy for this great and general evil? It is simple, cheap and effectual, as we know both by observation and experience, and consists merely in providing good laborers' cottages, so that all the farm workmen may board and lodge at home. This is cheaper and more convenient and comfortable in every respect, for all parties concerned. It relieves at once the farmer's family, and gives the laborer the privilege of enjoying his own. He can board himself more cheaply than another can board him, by purchasing just such articles as best suits his wants and rules of economy, which his wife prepares at no cost to himself. The farmer, by agreement, furnishes these supplies from his farm, instead of paying money, only to single men. Men with families are usually more faithful and steady at their employment, and are always near at hand. "We cannot get married men that are worth a straw!" exclaims some one who has never provided any thing for them but comfortless shanties, into which no decent man could ever be induced to take his family; but let neat, commodious, and tasteful cottages be built, ornamented with a few square yards of door-yard shrubbery, or mantled with climbing roses and honeysuckles, with a small and productive vegetable garden, and no difficulty will be found in getting men of the right stamp. Such cottages, with two rooms below, and two chamber bed-rooms, may be built by using upright siding with battens, rough and whitewashed outside, and lathed and plastered inside, for two hundred and fifty dollars; and by a little architectural taste (but no ornament) will contribute much to the appearance of the estate. The small farmer who needs but one hired man, has but one such cottage to erect; the more wealthy land owner can well afford to build half a dozen to relieve his family from a troop of laboring men. Nothing, we are satisfied, would tend so much as this to make the condition of the farmer in every way both comfortable and respectable, and to lessen the dislike which some farmer's sons and daughters acquire for this eminently desirable of all occupations.

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A Kentucky Corn Crop.—Kentucky has long been famous for extraordinary crops of Indian corn. If we remember rightly, a crop was reported there, some years ago, as producing 194 bushels per acre—some 20 bushels more than we have seen reported from any other state. Mr. S. F. Tebbs, of Cynthiana, informs us that he cultivated forty acres of corn on his farm near that place the past season, and sold the whole crop to a miller, who weigaed it at his mill, and that the whole yielded *ninety* bushels (56 lbs. to the bushel) per acre. The work expended upon it was as follows:—"Plowed deep (8 or 9 inches) early in the spring—planted 1st to 10th May, 3 feet by 3—gave it two furrows each way, and hoed part, where the grass (foxtail) interfered. All done and laid by before jointing."

Plans for the Year.

A person who first visits one of our best manufactories, is struck with the perfect order and system that prevail in every part of the establishment. Every man is busy, and every one knows his place; every part of the machinery is perfectly adapted to its intended purpose,—slow and powerful in one part, and light and rapid in another; the power applied to move the whole is just sufficient for all its multifarious operations, and none is wasted; the rough material is carefully worked up in such a way that nothing is lost; and skillful calculations are made of all the expenditures as compared with the future profits, and the whole carefully recorded by skillful clerks, in such a manner that those transactions that contribute most to profit, or those which occasion loss, are quickly detected.

Is it so with the farmer? Does he so arrange his business that every hired man is occupied, knowing at any moment what work is assigned him, and so that none are idle at one time, and again overwhelmed with accumulated work at another? Is the team power perfectly adapted to the amount of tillage in view, with steady labor, and without over-driving? Is the system of business such that the farm forces may be evenly distributed through the season? And, above all, has the careful and keen-sighted farmer ascertained by accurate accounts and by weighing and measuring, which of his operations are paying him best, taking the cost of the rough material, the expense of working it over, and its ultimate avails, all together into the estimate?

The farmer's rough material,—the land and the manure applied to enrich it,—is too often left out of his calculations. He counts only the amount of money *received* at the end of the year, and the cost of labor, but nothing more. A system of cropping is pursued that *appears* to be profitable, because it returns money; but if it is really impoverishing land, the owner is really selling off his farm piece-meal, and it is as great an error to call such a course profitable, as it would be to sell off a ten-acre slice each year, and throw the avails promiscuously into the sales of crops. Nay, it is *better* to reduce the farm in size, than to reduce it in quality, for the reason that a small and fertile farm yields more *nett* profit, than the same produce from a larger estate cultivated at greater cost. Manufacturers are very careful of the rough material—let no farmer be less so, because, unlike them, he is not compelled to buy his supply every year; for a bale of raw cotton or a ton of wool, is worth as much when left by inheritance as when paid for each day in cash. An interesting proof of the deceptiveness of *present* profit was furnished by an experiment performed some years ago in England with two distinct plans of rotation,—one, with the wheat crop occurring frequently, and constituting a more exhausting course; and the other more beneficial to the soil, but affording less return in cash. At first the close-cropping course appeared decidedly the most remunerative; but in the course of years the other course had so improved the land, that the minor or secondary crops themselves proved as profitable as the wheat crop had formerly been, which now far exceeded them, and thus rendered the enriching course the best, even throwing out of view its influence on the soil.

An even distribution of labor is of much importance, and not unfrequently entirely overlooked. Hands hired for the season commonly come to understand the routine of work much better than day-hands, and they work more cheaply. A farmer sows half his fields with wheat, with the hope of realizing a fine sum of money; but after the wheat is sown, his men have but little to do that is profitable until the next harvest, when he may be compelled to pay double or even triple wages, all of which trim down the profits, to say nothing about the "rough material." The appropriation of land to the production of some particular product exclusively, has been beautifully advocated by theorists, but in long practice it will not be found to compare with mixed husbandry, that is, with the judicious rotation of crops, combined with raising full herds of domestic animals for the production of manure. In other words, raise plenty of animals, to enrich the crops, which are to feed the animals again. This action and reaction is the very best way to create a plentiful surplus for sale, and at the same time preserve or iancrese the fertility of the farm.

There is no error more common than the imperfect execution of certain operations, when the farmer finds himself behindhand, with a deficiency of hands. This error is the cause of the luxuriant growth of mulleins and thistles so often seen in pastures; and of the heavy coating of weeds which overpower young root-crops, and choke the free growth of corn and potatoes. These often consume all the nett profits of the crop, and a defective plan thus compels the farmer to labor for nothing. We have known a crop of oats so diminished by a few days delay in sowing in spring, and a large field of wheat by a similar delay in autumn, as barely to pay for seed and labor, which otherwise might have yielded a heavy return.

There is no remedy for these evils but a careful and accurate plan of operations at the commencement of the year. The course of cropping should be distinctly marked out beforehand, and the number of acres determined for the oats, barley, corn, potatoes, carrots, wheat, corn-fodder, and so forth; the amount of labor for each of these may be nearly estimated, and the time in the season when each should be fully completed; and then, making allowance for interruptions, accidents, and rainy weather, the requisite force may be timely secured, and the whole machinery move on with regularity and without any derangement. All these plans must be fully recorded in a book kept for the purpose—if the memory is depended on, confusion and failure will be the certain result. If possible, the year's plans should be so completely digested, that the operations of every week may be distinctly laid down on a page allotted for each; the necessary variation of a few days, according to the earliness or lateness of the season, may be easily made afterwards. On such a book as this, notes may be made with the progress of the season, thus perfecting the plan for a second year. A few minutes daily devoted in this way, will accomplish much that is valuable for the farmer, and prevent a great deal of anxiety and confusion.

Bone Manure.

MESSRS. EDITORS—You have mentioned bones being valuable for land. I should like it if you would explain the best mode of preparing them, and the mode and quantity of using them. JESSE EASTMAN. *Landaff, N. H.*

Bones contain highly fertilizing matter in the form of gelatine and phosphate of lime. But the great difficulty is to reduce them to a state so as to act, for an unbroken bone will not yield a hundredth part of its materials to a single crop. Even ante-diluvian skeletons, which have laid thousands of years in the earth, have been found to have parted with only one half of their gelatine, and most of their phosphate remains. Hence the importance of grinding *finely*. Bones cracked into fragments the size of peas, will be many years in the soil before they become disintegrated and wholly efficacious.

1. *Ground bones* operate best when applied in autumn, as frost and moisture assist in bringing them to the best acting state. If applied late in spring, and especially if the season be dry, they will not probably be of any use the first year. On heavy soils, about six to twelve hundred pounds may be applied per acre; on light soils, about one half this quantity. The best way, however, is to compost them with stable manure, the efficacy of which they assist by the additional supply of nitrogen and phosphate afforded by the bones, which, being deficient in alcaline salts, are supplied from the manure. The addition of ashes, for this reason, is advantageous.

2. By *steaming bones*, under a high pressure, the gelatine is mostly withdrawn, and the remaining soil, when cold, becomes very brittle, and are easily ground to a fine powder. This preparation is very efficacious, but the difficulty in adopting it consists in the required steam apparatus. A less quantity of this preparation is needed per acre.

3. *Dissolving in acid*, has become the most approved method for ordinary use, and requires in order to be well done that the bones should be previously ground. If only broken, the acid dissolves the outer portions, leaving the most of the fragments untouched, and a part of the acid being consequently uncombined, proves injurious to vegetables, unless very cautiously applied. The best way to use the acid, according to Stockhardt, is to form a mound of a mixture of finely pulverized earth and sifted ashes, of such a size that a cavity (or crater) in it may contain one hundred pounds of bone dust. This mound must be beaten very compactly on the outside with a shovel. Sift out the finer bones, and place them one side, and place the coarser in a cavity. Sprinkle them, stirring and shovelling all the while, with 3 quarts of water, and then add gradually eleven pounds of sulphuric acid, still continuing the stirring and shoveling. The next day, add a like quantity of water and acid, in the same manner, and afterwards add the finer bones, previously laid aside, and when the action of the acid is completed, mix the bones, earth and ashes well together. From two to four hundred pounds of bones thus prepared are enough for an acre. As there are only 22 lbs. of acid to 100 of bones, by this process, there will be little chance for any free acid remaining. We would recommend that even this compost be mixed with common manure for application to land.

Drawing Manure in Winter.

Will manure carted into the field and left in small heaps during the winter, be deteriorated by the freezing and thawing processes to which it will be subjected in this climate? I should like to draw out the manure I intend to top-dress my meadows with next season, whilst I can drive over my lots without cutting up the surface, and should likewise wish to spread it as soon as it thaws out, in March or April, before the the last snows cease to fall, if I can do so without losing the fertilizing principles by the exposition produced in freezing. If I can do this work now, it will anticipate by so much the labor of spring, when I shall be pressed for time. In this particular instance my manure heap is a compost of muck with the accumulations of the barnyard; but I should like your judgment in regard to any and all manures. S. *Syracuse, Dec.*, 1853.

Fermenting and evaporating kinds of manures, that is, all fresh animal droppings, are most economically applied to grass lands late in fall, because every rain or thaw that occurs carries the fertilizing parts down into the soil, so far as this descending process can take place. If it has not been applied and spread in autumn, the next best time is very early in the spring. If put on after the arrival of warm and dry weather, it will be of very little use.

Manure may be drawn in winter with great advantage, and some good farmers prefer spreading it at once, believing the injury by exposure when frozen to be quite small and less than the loss by fermenting in heaps. If however the heaps are small, there will be very little fermentation. Ice, snow, and all frozen matters composed largely of water, will evaporate, even many degrees below freezing, but it is questionable whether any valuable amount will pass off in this way.

Where compost is used, if it contains a due proportion of loam and peat, no loss can occur by either mode of treatment or by fall or spring application, as fermentaiton has already taken place, or else the volatile parts have been secured by absorption.

THE BARLEY CROP OF THIS STATE.—The *State Register* of this city, says that the sales of Canal Barley in this market for the season just closed amount to 1,761,100 bushels. This includes only the sales of the crop of 1853. The average price is a fraction under 81½c.; the highest price paid was 88c.; the lowest 70c., and the greatest quantity sold at one price was 299,500 bushels at 84c. The aggregate value of the 1,761,100 bushels was $1,432,575. If the sales reported in the early weeks of canal navigation are included, which were at prices ranging from 66c. to 72½c., the aggregate sales reported will be 1,836,500 bushels, and the average price will be a fraction over 80¼ cents. The aggregate bushels is $1,481,341.

Albany County Agricultural Society.

The annual Meeting of the Albany County Agricultural Society was held in the State Agricultural Rooms, in this city Wednesday, Jan. 4. A respectable number of the farmers of the county were in attendance, and every town but two was represented. The following is an abstract of the Secretary's report:—

The officers have endeavored, in the discharge of their duties, to carry out the purposes for which the Society was organized, and in such a manner as to place it on a permanent basis, by securing the confidence and good will of the farmers of the county. The success which attended the first fair is a matter of congratulation, and a cause of just pride to every one interested in the progress of agriculture and the development of the industrial resources of the county. Those who regarded the Society as an experiment of rather a doubtful character, have been fully convinced that Albany county is capable of maintaining an Agricultural Society which will be a credit to herself, and compare favorably with kindred organizations in her sister counties.

As the award of premiums was publicly announced at the time of the Fair, (Oct. 6, 1853,) a brief statement of the general results of the first exhibition will be all that is necessary at the present time. In the Stock Department there were 122 entries. The whole number of Horses on exhibition was 96; of Cattle 107; of Swine 29; of Sheep 48; of Poultry 108. The amount of premiums awarded in this department was $285. The show of Native Cattle, and especially of Dairy Cows, was small, as also that of Sheep and Swine; and it is hoped that in future exhibitions this deficiency will be remedied.

In the department of Fruit, Vegetables, Flowers, Plants, and Dairy products, there were 81 entries. The show of Fruit and Vegetables was large, and in every respect creditable to the Society. There was little competion for the premiums offered on the products of the Dairy, and the statements accompanying the samples were not made with that accuracy which is desirable. The amount of premiums awarded in this department was $43.

In the Ladies', Manufacturers' and Miscellaneous departments, there were 110 entries, and the amount of premiums awarded was $129. Notwithstanding the derangement of the articles occasioned by the tearing of the tent, the show in this department was one of the most interesting features of the Fair, and should by all means be encouraged.

The whole number of Exhibitors at the first Annual Fair was 313, and the whole amount of premiums awarded was $457. The receipts of the Society from all sources for the current year were $1,252 85, and the disbursements $1,064; leaving a balance in the treasury of $188 85.

The reports of the Secretary and Treasurer having been accepted, the following gentlemen were appointed a committee to nominate officers for the ensuing year; B. P. Johnson, Albany; A. E. Willis, Coeymans; George Cary, Bethlehem; C. Batterman, Guilderland; Col. Levi Shaw, Rensselaerville; Z. M. Sanders, Watervliet; P. V. W. Brooks, New Scotland; D. Crary, Knox. After deliberation, they reported the following officers for 1854:—

President.—James W. Jolly, Coeymans: *Vice President*—B. P. Johnson, Albany; *Secretary*—Joseph Warren, Albany; *Treasurer*—E. E. Platt, Albany.

Managers — Joseph Cary, Albany; L. Lobdell, Berne; Elias Milbank, Bethlehem; A. E. Willis, Coeymans; C. Batterman, Guilderland; Dennison Crary, Knox; Joseph Hilton, New Scotland; Levi Shaw, Rensselaerville; A. Osborn, Watervelet; H. E. Robbins, Westerlo; who were unanimously elected.

A considerable number of gentlemen immediately made themselves members of the Socieiy; and the unanimity of feeling and the interest manifested in the succes of the Society, argue well for its future prosperity and usefulness. Joseph Warren, *Sec'y.*

Roofing for Buildings.

Eds. Country Gent.—I notice some remarks in your paper of the 28th inst. in reference to cheap roofs, and the cost of some, as reported in the Prairie Farmer, as being from five to six dollars per 100 feet. Now, speaking from experience, I think I can tell of a covering for roofs cheaper than any of that kind, and at the same time not liable to any of the objections allowed to exist in those of which you speak, while it is of a material certainly less destructible from exposures incident to all roofs, than that spoken of there.

The roofing planks or boards should be of hemlock, laid close together, and at least three nails driven in the width of the planks or boards wherever nailed, to prevent warping from the heat of the sun. Over these may be applied a coat of coal tar for the purpose of furnishing throughout the whole a fastening to the covering to be spoken of, as the sun as it beats on the roof while the tar is not yet thoroughly dried in, renders it sufficiently liquid to cause an adhesion to be effected between it and the covering.

The best material to cover with is twilled cotton cloth, costing here generally not to exceed eight cents per yard, and possessed of sufficient body to retain, without allowing to pass through it, coal tar mixed with cement, (Rosendale,) or fine brick dust, laid on with a white-wash brush. Over the whole while yet new, sand can be sifted; this serves to keep the covering in its place and to prevent the wind, from crevices below the roof, from raising the roof covering, and when thoroughly dry, cracking the coating on it.

This kind of roof, unlike those referred to in the beginning of this communication, will be good and permanent where those are nearly worthless, viz. on steep roofs, and certainly here more than on flat or shed roofs, costing less than one-third of those. The cloth may be laid crosswise the length of the boards or not as the maker wishes—should be laid on the surface of the roof boards, without any raise, and lapped at least one and a half or two inches, using tacks of the size of those used commonly in fastening down carpets, driven pretty close together; the hemlock being possessed of great retentive power, no fear of their drawing out need be entertained, and as for rusting, the tar renders that impossible. I covered a roof of upwards of 400 square feet in this way at a cost of about $7,50, which has now been in use three years and upwards, showing slight defects occasionally, but which are wholly attributable to my want of experience in laying it down—I never having heard, of any thing before like it, and being, as I believe, the first of the kind in this region of country.

Hoping that the information communicated may be of use to many on whom, like myself, Mammon has not smiled benignly, I will farther say, that in answer to any inquiries through your paper, I will communicate, if agreeable to you, any information which my experience, since acquired, will allow. L. V. W. *Bethlehem, Dec.*, 1853.

Helderburgh Farming.

Editors Country Gent.—In my letter of Dec. 7th, on Helderburgh Farming, I promised to give you the rotation of crops still farther, after I had prepared the land and considered it in sufficient tilth to raise any crop. We can now cultivate almost any crop to advantage, provided we can keep the land in good heart without laying out so much expense as to entirely destroy the profits. To secure this necessary end, in the latter part of March or fore part of April, I sow on the wheat crop about ten pounds of the small kind of clover seed to the acre. I prefer to sow it after the fall of some light snow. I prefer the small kind because it makes a turf sooner than the larger, and comes to maturity much earlier. By the time the wheat is ready to come off in August, this young clover has obtained a fair start. The fall rains assist it still more in forming a complete mat over the whole surface of the ground. Should snow fall early, without much frost in the ground, this clover will grow and thicken during all the winter.

In the spring, say about the 10th or 15th of May, this clover will have attained about its full maturity. It is then plowed in with a flat furrow at 8 or 10 inches depth, and a roller passed over to make it smooth. Then marked out both ways with a corn-marker, from 2 feet 9 inches to 3 feet apart, and is then ready for corn or potatoes, whichever we may choose to grow. The method of treating the corn crop does not differ materially from that discussed by your Malone correspondent, in your paper of Jan. 5th. I use a small handful of composition, (consisting of about ten bushels ashes, three bushels plaster, and 100 lbs. guano,) to the hill, and prefer not over three stalks to the hill when the rows are but three feet apart. I consider the stalks, if well secured, to about pay the whole expense of raising the crop. To effect this, I cut up early in small stooks, and if possible secure all in the barns without any rains to bleach them.

I consider this clover plowed in, in the manner decribed above, as good as about twenty loads of manure to the acre. Should we plow in the fall, as does your Malone correspondent, this green manuring would be lost, and besides experience has abundantly taught the farmers of this region that fall plowed sward land for corn, is attended with almost an entire loss of crop from the ravages of the "wire worm," as it is called; whereas they are seldom known to affect the crop when sward land is left till spring.

You see I prefer leaving the herbage to grow until I am ready to plant, and would do it all in the same day if convenient. Land plowed in the fall does not prove so detrimental to the potato crop; for if the worms do eat off the main root the others become equally productive. The only difference is, so far as my experience goes, that we have just as many potatoes when the stalk has been attacked by the worm, only an almost infinite number of exceedingly small ones besides. Now I am speaking of these "wire worms," I will inquire, Mr. Editor, if you or any of your correspondents can inform us how we can rid the land of them? I have seen it suggested in some of your papers, that soaking the seed in tobacco water will entirely prevent their ravages. Will it do as well on barley? Why will they attack the fall plowed, and leave the spring plowed almost entirely harmless? But I must hasten to give you the rotation still farther.

The corn crop being secured, the next in order is peas; then wheat, as before described; then seed with clover again, and this rotation may be continued for any number of years, and all the crops improve in quantity and quality (other things being equal) from year to year, until I have no doubt fifty bushels can be realized from the acre, with no expense above the ordinary labor, save that of a few pounds of clover seed and the carting of the manure, which is very much increased in consequence of the increased produce of the acre. As we increase our product from the acre, we increase our stock on a given number of acres; and this stock well husbanded, produces that fertilizer which would, with a little enterprise, soon make our land "flow with milk and honey."

Should it be deemed advisable at any time, to raise grass for hay or for soiling, I should adopt this method: instead of the ten pounds of clover seed to the acre, I should, in the fall, when sowing the wheat, sow about two or two and a half bushels of timothy, and say half a bushel redtop seed to the acre, and then the ten pounds of clover in the spring, as before stated. The objection to seeding so heavy I know is, that it cannot all head out, and is thus of no use. I know that not one spear to a million can head out, but as much will head out as would if seeded lighter, and the remainder makes a rich and fine under-growth, of which all kinds of stock are so fond, and besides it being so thick, once wet in the spring, it never dries out so as to injure the growth. It may be mowed twice, and even three times, and will produce at least four tons to the acre. One acre is sufficient to keep a team of horses during the season of fattening, by keeping them up, whereas four acres would be necessary should they be suffered to run out. The same observations will apply to other kinds of stock, such as milch cows, working oxen, &c. The other three acres can be profitably employed in raising other crops. I tried the experiment a few years since on a small scale (about half an acre.) As soon as the grass manifested any disposition to lodge, I cut it and secured three loads of good hay. This was in June. The next mowing was about the first of August. This yielded two loads, and the next in September, which produced one load. I consider this last mowing as rather a disadvantage than otherwise, as it leaves the ground too bare, and is very liable in consequence to winter-kill. I am aware of the objection that such hay does not "spend well," and the answer is, that it does not. But cows thrive well on it, and give, if not as much milk as when fed on grass, at least far richer. I know that ripe hay, as it is called, will "spend well," for I have seen it lay before the stock from day to day, and the stock none the better for it, when the other quality would not only be "eat up clean, but they would lick the spot where it had lain."

I have now given you some information as to our manner of farming in these Helderburgh mountains. Some farther improvements suggest themselves, which I have not mentioned. It frequently happens that wet or cold patches are found sometimes lower than the surrounding surface. These patches are so wet as to be unfit to till when the rest of the land is ready, and if tilled when wet, produce nothing. When they are not caused by springs, my method is to excavate them when dry to the depth of about three feet with plow and scraper, sufficiently wide to drive in with an ox-cart. All the small stones are then collected that we can lay hands on, and dumped into this excavation, until filled within a foot or foot and a half of the surface. The soil hauled out, is then hauled back again. The result is that the water settles down amongst these stones, and leaves the surface of the ground dry as soon or before the rest of the field is; and I will add, you would be astonished to witness the growth in grain or grass around these places thus underdrained. In case of springs, I dig a trench some three feet deep and cart in all the small stones and cover it up as before—this answers a double purpose; it rids the land of small stones that are unfit for walls, and furnishes a permanent drain. The stones should first be covered with inverted sods, straw, weeds, or some other substance, to prevent the dirt settling down in the crevices and thus obstructing the water. A drain that I laid some six or seven years ago, does as well now as ever.

The standing objection to all these improvements is that they cost too much. I reply, we may estimate the price of land here at about $25 per acre. Now, by laying out, say $15 or $20 on the acre, it will then be less in price than land in western New-York, and I cannot see why it is not equally as good, the difference in advantages to market excepted. Our plank roads to Albany, New-Baltimore, Coeymans and Coxsackie, when completed, will bring us within less than half the distance we now are from those several towns. But more of this when I call your attention to the raising of buckwheat, the great staple of this county, and I may say of the western towns particularly.

I must now close this sheet and apologize to you for these fragmentary remarks—these "crumbs" that seemed to fall from my last. Wishing you much success in your enterprise on this "new year," I remain, as ever, very respectfully yours, G. W. Durant.

Rensselaerville, Jan. 10, 1854.

Experiments with Super-phosphate of Lime.

Messrs. Editors—I am going to inflict upon you some of my notions and experiments. First, were you aware that your bump of cautiousness was pretty large? In the course of my reading last winter, I became mightily tickled with the name of "Super-phosphate of lime," and the wonderful properties it was said to possess, and looked carefully over each number of the Cultivator for your opinion; but you, I suppose, was pleased to keep that to yourself, though repeatedly inquired of. Well, I went to Lowell, six miles, and there not being any on hand, ordered a bag of that made by "Professor Mapes"—went again and brought home my bag, being told by the dealer that the directions for using it were within the bag; but upon examining, no directions were to be found; but I made another discovery, viz., that the bag was marked "Deburg, Cliff-street, N. Y., Longett & Griffing." Well, being left in the dark, I went on to experiment as follows:

May 21st, planted corn, and put one large spoonful of the phosphate in each hill of eleven rows, in all about 850 hills, leaving spaces between without the stuff.

On the 23d, on summer squashes and cucumbers in alternate hills, 2 spoonfuls—on pole beans, alternate rows, one spoonful in a hill, and on beets, carrots, peppers and cabbage seed, in drill, alternate rows.

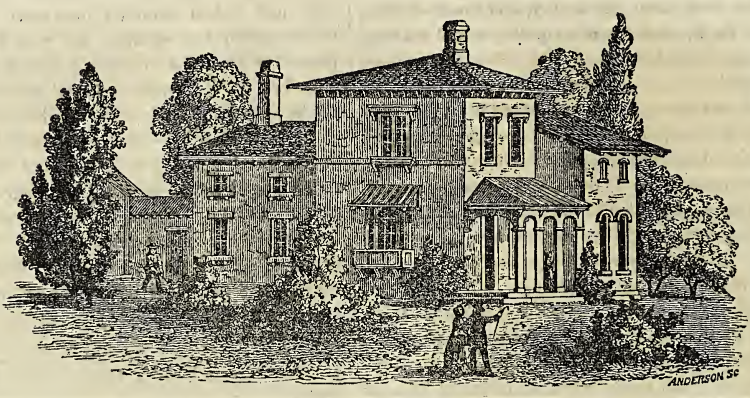
On the 24th, 18 lbs. with twice its bulk of moist earth, sowed on 30 square rods of wheat, at the rate of ¾ lb. per square rod. On the same day, same quantity sowed on strips of oats. On the 1st of June, put on beans after the first hoeing, one row in four, 8 spoonfuls in the hill—one of two rows of early corn, one of three rows of potatoes, all the same. On one of three rows of peas, and on three hills of cucumbers, three inches high, so as to cover the ground one-eighth of an inch thick.

After having done as above, I watched for the result, and behold, what? Nothing, nothing—all moonshine, with the very slight exception of the beets, carrots and peas, in the first period of their growth. On all the rest, its operation was perfectly invisible throughout the season.

My soil is a granite soil, yellow loam, with some cobblestones. Now wherein did I fail? Who can, or who will tell? The dealers in, and makers of, these manures, as they term them, accuse us poor farmers of being shy of buying their *stuff*. I for one own the soft impeachment, now more than ever, for I have not $5,00 to throw away every day, nor am I remarkably fond of being totally disappointed.

A correspondent of yours in the Dec. No., put no more phosphate on his hills of corn than I did on mine, yet he says he had a large increase from its use. I think his was of the same make as mine. Now if the information can be had, I should like to know why I failed and he succeeded? Luther Butterfield.

We have certainly been chary in recommending the general use of superphosphate of lime, for the reason that we are as yet without sufficient accurate experiments to show on what crops and upon what soils it may be profitably used. It is well worth while for farmers, whenever they can without too much expense, to test the value of such fertilizers; but no one can safely recommend them for general use without better data than has yet been presented to the public.

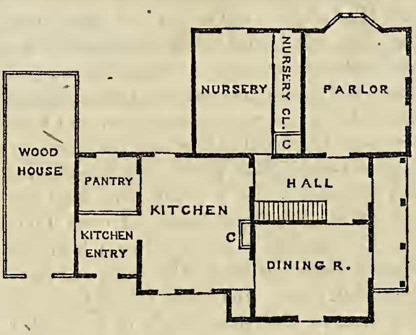


Plan of a Country House.

THE Italian style of building commends itself on several accounts as one of the best, if not the very best, of all the different styles for the exterior of country houses. It has all the air of simplicity and utillty combined, for which the Grecian has been so long distinguished, at the same time that it is perfectly free from all formality and stiffness. It is not attended with any of the inconveniences that so frequently result from steep-roofed gothic dwellings, giving the upper rooms a bad form at the ceiling, and causing an uncomfortable heat under the summer sun. The entire freedom of form for its exterior, fits it for almost any plan that may be devised, and this quality becomes one of great value to a large portion of American country residents, who so frequently find it convenient to enlarge their dwellings, as their families and means increase. Additions, judiciously made, rather add to than detract from the architectural effect of the original structure, a quality which is not found, at least in so eminent a degree, in any other style.

We furnish above, an engraved view of a convenient and moderate country house possessing an Italian cast, perfectly simple in its structure, and entirely free from the campanile and other unnecessary decorations. The further roof seen in the view, only covers, by its double sides, the parlor; while the nursery has a lower and separate roof, hipped like that of the veranda. Below is the plan, which sufficiently explains itself, *c c* being the places for the chimneys, for the reception of the pipes of such stoves as may be needed—for these, with proper ventilation, are quite as healthy as any other mode of heating, notwithstanding the frequent remarks of those who possess more poetry and imagination, than science and fact.

In estimating the cost of such a house, very much will depend on the style of finish, and the size and height of the rooms, causing a variation from $1,500 to $3,000. If built as a plain and simple farm house, depending mainly on neat and tasteful planting for its decoration, and with rooms only eight or nine feet high, it would scarcely exceed the former sum; but if the rooms are built eleven or twelve feet high, and in a more finished and substantial manner, it could not be done for less than $3,000, and the cost might easily be run up to four or five thousand



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Successful Method of Grafting the Peach.

To successfully graft the peach tree, has been universally considered next to an impossibility; but in consequence of the ease and success of budding, this concession has seemed of but little practical importance. Yet every one, of the least experience in this matter, knows that many trees, where budding had been neglected or unsuccessfully performed, might be saved and rendered valuable if grafting could be performed with success.

I am aware that Dr. Page, of Washington, published and coppyrighted, about a year ago, a method of grafting the peach, for which he claimed success, equal to that attending ordinary grafting. His plan consisted in checking the growth of the tree simultaneous with grafting, by transplanting or root pruning.

The plan given below is more simple, and from limited experience I should think more successful.

It consists in grafting early, as for other stone fruits, in the manner of the common cleft. The side seams are to be waxed in the usual manner, the cleft *filled*, and the end of the stub covered with *warm* or melted composition. The whole is then to be wound with composition cloth, to prevent curling of the bark.

That this plan will succeed, is a demonstrated fact, but in how great a proportion of cases, experience is too limited to determine. Suffice it to say, that eight scions set in different branches of the same tree, all lived and grew with astonishing rapidity. Will others give this plan a trial and report the results. O. C. GIBBS, *M. D. Perry, Ohio.*

The Corymb-flowered Habrothamnus.

HABROTHAMNUS CORYMBOSUS.—This plant, like *H. elegans*, is a native of Mexico, but not so striking or so well adapted, where only a few plants are cultivated, as that species; still, in an extensive collection, with good cultivation, it is worth growing. The plant has a vigorous erect habit, producing its flowers in a terminal corimb, funnel shaped, gradually widening upwards, and forming a pitcher-like appearance; the color is a deep rose.

Owing to its vigorous habit, it should not be too much stimulated either by soil or watering; otherwise the culture recommended for the *H. elegans* will answer for this.

It is said to do well planted in the open border, as a specimen plant. For this purpose it should be planted out as soon as all danger of frost is over. In a loamy, gravelly soil, it would doubtless form an attractive feature in a flower garden. E. S.

Mulching in Winter.

We were surprised to observe a few weeks ago this pratice recommended for trees by one of our best horticultural writers; and several others of lesser magnitude, have implicitly followed his example and repeated the recommendation.

Instead of mulching for winter, we should rather recommend the careful removal of all the material used for this operation, in the autumn or some weeks before winter, if composed of straw, litter, or any substance affording shelter for meadow mice. We have known very serious loss from a neglect of this timely removal.

We presume the object intended by the recommendation alluded to, was to protect the roots from the severe cold of winter; an object which may be attained, so far as newly transplanted young trees are concerned, by forming a mound of earth over the roots. Such a mound, even if only eight inches high, and but little more in breadth, will perfectly exclude mice from winter attacks, as we have proved in *thousands of instances*, without a failure.

A Hardy Dwarf Orange.

There is a little dwarf tree of the orange tribe (*Citrus japonica*,) which has been lately introduced from China, which, although too acid for eating fresh, may prove valuable for culinary purposes, especially as it possesses a very unusual quality for this tribe of trees, namely, that of entire hardiness for the middle and most portions of the northern States.

The fruit is about the size and shape of a large English gooseberry, has a sharp acid pulp, and is much used by the Chinese for preserving. We have no doubt that it would be found especially valuable to give flavor to other preserved or dried fruit. The tree grows in China to a height from three to six feet, or a little larger than our currant bushes, and is described as being very productive. The fruit ripens late in autumn, and forms a handsome contrast with the clear green leaves, which are smaller, thinner, and narrower than the common orange.

Strawberries in Winter

R. G. PARDEE, of New-York city, well known to our readers as our correspondent formerly residing at Palmyra, N. Y., writes as follows, under date of Dec. 30, 1853: "We have strawberries in Thorburn's window, taken from C. F. PEABODY's garden in the open ground in Columbus, Georgia, on the 20th Dec. instant. The plants, fruit, and earth, were transplanted into a large pot of earth, and that enclosed in a basket and sent by express, so they arrived in as perfect order as grown in the garden. Ripe and green fruit in all the different sizes and ripeness—large, fine Hovey's and Early Scarlet,—looked luscious enough in this day of snow and frost."

Will our esteemed correspondent please furnish us the mode of treatment by which this remarkable result has been attained?

Early Tillotson Peach—Native Localities of Fruits.

The Editor of the Horticulturist, in alluding to the failure of the Early Tillotson at Rochester, says he has had recent information of its complete success in various parts of Ohio and Kentucky, where it is free from mildew, often eight inches in circumference, and of the first quality. The Horticulturist thinks the Tillotson originated in Wayne county, N. Y., and mentions this as a rare instance of a variety succeeding better in other localities than the place of its origin. We may add that it has for several years proved of great excellence in southern Virginia, and in Mississippi, Alabama and Louisiana.

The Tillotson originated in the south part of Cayuga county, a few miles from the village of Aurora, but was introduced to general notice and disseminated by a resident of Wayne county. The soil of southern Cayuga is mostly of a strong heavy nature, but we do not think this had any effect in modifying the permanent character of the variety at its origin. There seems indeed to be an erroneous view taken of this subject by most American writers on pomology, namely, that the *act of originating* a new fruit by a particular locality of the country, stamps indelibly upon that variety a certain constitution and character, which fits it for that locality better than for any other. Hence, foreign fruits are looked upon with suspicion, and native fruits pointed out as the only ones entitled to the confidence of cultivators. We are compelled to adopt a different opinion, and to look upon such sorts, and such only, as entitled to our confidence, as long continued cultivation has proved valuable, without more than a secondary regard to their native locality.

If a pound of the seed of the best pears, grown on trees in France should be planted at London, or at Boston, or Cincinnati, we are not to suppose there would be any difference in the character of the varieties produced, whether germinating at one place or the other. What possible difference can it make to a seed of the Seckel pear, whether it is sprouted in the soil of New-York or Belgium? *Its character is fixed before it germinates*, as is clearly shown by the resemblances of the product to the parent, which no external treatment can alter or efface. Difference in *latitude*, it is true, often produces marked results on fruits, but difference of *longitude* in itself much less: For both have the same sun, a similar soil and atmosphere, and why should an interposed ocean cause any material difference?

Notwithstanding all this, the fruits cultivated at any locality are generally best for that locality, but not so universally so as many suppose, and for a different reason. The cause of this local superiority may be easily understood. Although a pint of seeds planted at one place will produce the same varieties precisely, whether planted in one country or in another, yet, when they come to bear and prove their character, one set of them would be selected at one place, and a *different set* at another, according to the peculiar influence of the soil or climate on certain soils, at the several places. If a thousand seedling trees were raised at Angers in France, perhaps a half dozen would be selected as of good quality; if the thousand had been raised from the same seed at Rochester, or if the young trees produced therefrom at Angers, were removed, a different half dozen might be chosen, because the soil and climate produced dissimilar results at the two places.

There cannot be any other local influence, operating to any considerable extent, than this; and from it we may infer, that although a fruit will *probably* do best in a soil and climate similer to that of its origin, yet it *may* do better elsewhere; and for this reason, all good fruits in one district, are worthy of trial in others. The Seckel pear, although smaller in Western New-York, is of higher flavor than at Philadelphia, the place of its origin. The Jonathan apple, a native of New-York, is much finer when well grown in central Illinois; the Doyenne, Bartlett, Femish Beauty, Winkfield and Louise Bonne Jersey, cannot possibly stand higher in their native European localities, than in large portions of America.

We have long since come to the conclusion that there is a vastly greater influence exerted on fruits, which grow in the *same garden*, by *good* and *bad culture*, than by a great deal of difference of locality. A neglected tree will produce small, bad, and tasteless or astringent fruit; highly cultivated, well pruned and manured, the same sorts will be large, juicy, and really delicious. We have not unfrequently witnessed this difference. We have shown the Editor of the Horticulturist upon our own grounds, beautiful specimens of the Tillotson peach, in the form of crimson globes, two inches in diameter, which had grown on a fine soil, and on *well pruned trees*, and we *could* have shown him other and more neglected trees, of the same variety, that bore very contemptible fruit. We are aware however that good culture with this peach has not succeeded in a few places, and more particularly in the immediate neighborhood of Rochester.

Large Pears.

In October last, there were exhibited at the Annual Exhibition of the Montgomery county (Pa.) Agricultural Society, three *Duchess D'Angouleme Pears*, grown by **Robert Iredell**, editor of the Norristown Herald and Free Press, the weight of which were respectively, 1 lb. 3 oz., 1 lb. 3½ oz, and 1 lb 9¼ ounces. They were the product of a tree, planted from the nursery in the spring of 1852; the tree was 5 ft. 4 in. in height last spring. The two largest pears were grown on one twig. **Dr. Brinckle** pronounced them the largest, the finest specimens he had seen in this country.

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From a single seed, I grew eighteen pumpkins, weighing 534 lbs.; the smallest weighing 20 lbs. 5 oz., and the largest 36 lbs. 9 oz. Averaging 29 lbs. 12 oz. If any one has seen a larger yield from one seed I would like to know it, and will feel thankful to them if they will have it published in the Cultivator that I may see it. **Franklin Doolittle.** *Susquehanna, N. Y.*

Quince Stocks.

Is there any real ground for the pretensions set up by some of the nurserymen, that the imported "*Angers* Quince" is superior as a stock for dwarfing the pear, over the common varieties of this country? I may as well say in advance, that I am incredulous on the subject, and that too after no inconsiderable experience and observation. In fact, I don't believe a word of it; but as it is held by some good friends of mine that no other than "Angers" stock is suitable for the propagation of dwarfs, I should be glad to know what you think about it. S. *Syracuse, Dec.*, 1853.

The Angers quince, which is an improved sub-variety of the Orange quince so far as luxuriance of growth is concerned,—is best for the pear in nearly all instances. Its growth continues later in autumn, which occasions a better adhesion of the bud, and admits a later insertion. There are a few soils, particularly favorable, where the common or orange quince succeeds nearly or quite as well as the Angers for those sorts best adapted to dwarfing, such for example as Angouleme, Winkfield, Louise Bonne Jersey, Beurre d' Amalis, &c. We have often observed that some nurserymen succeed in cultivating a large number of pears with great success on quince, while with others having apparently an equally fertile but evidently a different soil, many of these will fail. Samuel Walker, of Roxbury, Mass., who has one of the finest collections of thrifty pear trees in the country, informed us that he failed with the Rostiezer, Aremberg, and several other sorts, even when *double-worked* on the quince. On the other hand, we have seen these same varieties growing in other nurseries with luxuriance and uniformity, without double-working; and in some instances, those eminently refractory sorts, the Flemish Beauty and Marie Louise have been seen to grow freely and bear for many successive years on the quince. These however, are very rare exceptions to the general rule, and we mention them only to show that single experiments are insufficient to decide questions such as these. And although the orange quince may *sometimes* succeed as well as the Angers, yet for general use and promiscuous planting, the latter should always be sought, for it is always equal to any, and usually much the best.

Pears and Peaches for Vermont.

What varieties of pears would you recommend highest for cultivation in this (43½) degree of latitude?

Is it possible to raise peaches in this latitude and what sorts would you recommend?

Can the best kinds of foreign grapes be raised here—say the Black Hamburg, or White Muscat of Alexandria, on the south side of buildings, by protecting them from frosts with blankets or canvass, and left to ripen off along in the warm days in Oct., and burying the vines in winter? H. S. *Felchville, Vt.*

There are circumstances besides latitude that greatly influence the successful culture of the peach. When cold winds are softened by unfreezing lakes, the effect is very favorable. For example,—Cleveland at 41½° lat., is a far better locality for the peach than southern Ohio, at only 39°. The south shore of lake Ontario, at 43¼° is incomparably more favorable than central Pennsylvania, three degrees further south. The favorable influence of hills and exposed places has been distinctly pointed out in No. 12, p. 375 of Cultivator, or No. 46, p. 314 of Country Gentleman. We have no doubt that many places might be selected in Vermont for the successful culture of the peach. Serrate Early York, Cooledge's Favorite, Crawford's Early, Early Barnard, White Imperial, and other varieties, might be chosen.

The Black Hamburg and Muscat of Alexandria could not be profitably raised in open air as proposed. A cold house would require less attention, and be incomparably more successful. There are a few exotics that may be grown in open ground, such for example as Black Cluster and Early White Malvasia.

Foreign Grapes.

Muscat of Alexandria.—To those fond of a grape of a rich musky flavor, fine size, and an elegant appearance, the one in question, of which we give an illustration, reduced to one-fourth size, is well adapted. Mr. Downing says of it:—"The most delicious of all grapes, but requires to be grown under glass in this climate." It should also, to grow it to perfection, have the benefit of artificial heat at times; especially is this necessary at the time of the setting of the fruit, for without it, it is often a very irregular setter.

In vineries of any length, it will be found a very good way to divide them into two or more, by glass partitions, which will answer the two-fold purpose of bringing early and late grapes, as well as affording means to give each class of grapes the treatment they particularly require.

Where that is not obtainable, this one, as well as its variety—the *Cannon Hall Muscat*—should always occupy the warmest part of the house.

The color of this grape when well done, is a transparent pale amber, each berry often an inch or more long, branches from 9 to 12 inches, with small seeds, and sometimes entirely seedless. E. S.

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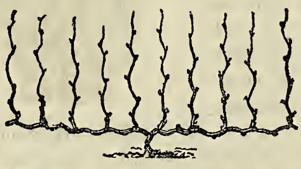
Ornamental Trees.—Messrs. Lippincott, Grambo & Co. Booksellers, Philadelphia, have just issued a new work, entitled, the American Handbook of Ornamental trees, by Thomas Meehan, Gardener to C. Cope.

Winter Pruning

Among the operations that the amateur can employ an hour or two of the sunny part of the day out of doors, is the pruning of the various fruits, such as *gooseberries, currants, grape vines*, and *apples*. Gooseberries fruit from small spurs on the old wood, and on the last year's shoots also. Hence they require only the superabundant wood cut out, leaving about an inch at the bottom to form the spur; no branches should cross or be closer than nine inches to each other.

Currants.—The black, bears from the young wood only; hence requires only thinning, and an occasional worn out shoot taken out from the bottom, which induces young shoots to start from the same place, and so keep the tree young and vigorous. The red currant requires differant treatment, as its fruit is borne only on small spurs on the old wood. All last year's wood should be cut back to one inch, excepting the leading shoot on each branch, which may be left from three to six inches long, according as it may be wished to increase the size of the bush. It will be found a good way in pruning gooseberries or currants, to keep the center of the bush entirely open, leaving as many tiers of branches around this open space as the size of the tree will admit of, by which means a larger space is presented to the action of the sun and air, materially aiding the quality of the fruit.

Grape Vines.—The sooner they are pruned the better. By far too much wood is left in most cases on the vine, diminishing the quality of the fruit, and rendering them more susceptible to disease. The leading shoots of the vine should be trained straight, whether horizontal or perpendicular; at a distance of eighteen inches or two feet apart, cutting off all lateral shoots growing from these back to one eye. If the space on which the vines are growing is a good height, the best way to train the leading shoots is, first to take an horizontal shoot on each side of the main stem, at about six inches or a foot from the ground; then from this at every 18 inches, (see figure,) start a perpendicular shoot to the top of the wall; but if the space is low, a better way is to take the first leading shoot perpendicular, and from this start the branches horizontally at the same distance apart. This gives the vine a neat and tasty appearance and allows the foliage plenty of room to expand, without which grapes of first quality cannot be expected for any length of time.



Apples require some little attention in regulating the shoots and keeping the tree compact; all cross wood should be taken out, the center kept clear, and every branch allowed room to develope its foliage; the superior quality of the fruit will more than repay the trouble. Fine fruit must not be expected if the tree is a thicket; the only passable fruit will be at the points of the shoots; those on the inside will be small and colorless. E. S.

Fruits Free from Rot.

I have a tree grafted with Spitzenburghs, the fruit of which is much subject to rot. Please inform me whether if grafted with other varieties, the fruit will be as liable to rot. A. Wanzer. *Sherman, Ct.*

As we do not know the cause or character of the rotting described, we can answer only in a general way, by observing that the Spitzenburgh is usually not so hardy a tree nor sound a fruit as the Rhode Island Greening, Roxbury Russet, Baldwin, Peck's Pleasant, and a few others, and therefore there is a probability that re-grafting with these fairer varieties, would effect an improvement.

Flowers for the Shade.

I should much like to see a list of flowering plants that do as well in the shade as in a situation fully exposed to the sun. Jas. Hitchcock. *Port Clinton, O., Dec*, 28.

There are several flowering plants that do better in the shade than when fully exposed, among which are those brilliant evergreen shrubs, the Kalmias and Rhododendrons. The Mezereon succeeds best in the shade, as well as the Funkia japonica, the gentians, chrysanthemums, pansies, the periwinkle, gladiolus floribundus and nataliensis, the Tiger flower, the auriculas, cowslips, and the forget-me-not. Most of the Phloxes, and Ranunculus do well in the shade, and many bulbous plants, as hayicinth, tulips, &c. All our wild flowers from the woods will of course succeed; such for instance as the Hepatica, Claytonia, Erythronium, Trillium, Lilium philadelphicum, Cypripediums, Orchis fimbriata, and Cymbidium. Some evergreens are much better grown in the shade; among them the box, which is always of a fairer green when sheltered from the sun. The English Ivy and the yew are of the same class. This list might, doubtless, be greatly enlarged by those who have had occasion to grow plants in the shade, our experience being quite limited in this direction.

Manure for Fruit Trees.

Will you be so kind as to inform me what kind of manure is best for peach and apple trees, young ones, I mean; by doing so I shall take it as a great favor. Truly, L. Adams. *Newark, N. J.*

For nearly all localities, nothing will be found better than a compost made of turf, stable manure, and a portion of ashes. The turf should constitute one-half or two-thirds, and the ashes if fresh, about a twentieth part, or if leached about a twelfth part of the stable manure. Bone manure, if accessible, may be added in still smaller quantities, but has not been much tried. A mixture of loam and peat may be used as a substitute for, or an addition to the turf. The heap should lie several months, and be well mixed. If for immediate use, rotten manure and ashes in the above proportion, will do very well.

A Cheap Green-House.

For those who are fond of flowers, there is nothing more interesting than their culture during the dreary months of winter. A few kinds will flourish well in the dry, hot, and changeable air of ordinary stove rooms; but it is not always convenient nor practicable to occupy the limited space of living rooms in this way, and most plants will not succeed so well here as in a cooler and more uniform temperature. An ordinary green-house is a somewhat costly structure; and regulating the fire during a whole winter is quite a formidable task. For green-house plants, properly so called, or those which do best in an air but few degrees above freezing, we have lately adopted a plan which we find to succeed admirably with but little care, and without the cost or attention of fire-heat. Although this plan is not altogether new, we believe a description will be useful and acceptable to many of our readers.

It consists of an extension made to an ordinary cellar, on the south side, and covered with a sash like that of a common green house. Fig. 1, is a section, *a* being the cellar; *b*, the ordinary place of the south cellar wall, which is removed, leaving the space open to the green-house extension; *c c* are the walls, and *d* the sash. Fig. 3 represents the external appearance of this contrivance, showing the sloping sash, and a portion of the cellar wall *w*, and siding of the building, *s*.

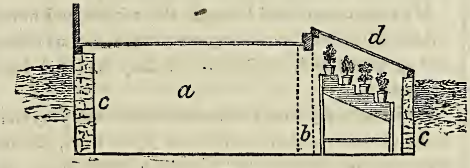


Fig. 1.

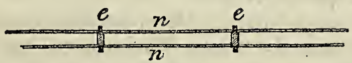


Fig. 2.

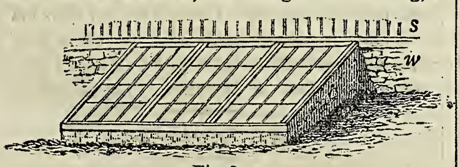


Fig 3.

In order to obviate the necessity of fire-heat, it is requisite that so large a surface of sash should be double-glazed. Fig. 2 exhibits a cross-section of this double sash, *e e* being the sash-bars, and *n n* the panes. The bars are made on *both* edges in the same form that ordinary sash is made on the glass side for the reception of the panes. We have had cross-bars made between these sash bars, like ordinary window-sash, so that the lower panes are set in as in common windows, the upper or lapping panes merely resting on these cross-bars. This arrangement makes the windows rather more secure from the passage of air, but is not absolutely necessary.

This structure being attached to an office where a fire above the cellar is not regularly kept up, sometimes needs a very small fire in a stove when the thermometer sinks to zero; but if connected with a dwelling constantly occupied, no artificial heat would be ever needed.

Production of Fruit Buds.

The Editor of the Journal of Agriculture has published a captious and foolish article in his columns, finding fault in a rude manner with a paragraph in a recent number of this paper. The article we allude to is signed "*A Learner,*" and disputes the well known and generally admitted truth that a *free flow* of sap through a tree favors the production of leaf-buds, and of wood and leaves; and that whatever impedes its flow and causes its accumulation, favors the production of fruit buds. Every intelligent horticulturist is aware that when trees are young, the sap flows freely through all parts, and that a rapid growth of wood and leaves is the consequence, while fruit buds are sparingly produced. But when the tree becomes older, and the sap vessels more rigid, obstructing in some measure this free flow, fruit buds are more abundantly produced. The same result takes place when young trees are stunted by imperfect cultivation, or when the sap is impeded at the junction of the pear on quince stocks, or of the apple on paradise stocks. The increased fruitfulness produced by root-pruning, by the cultivation of dwarfs, by summer pinching, and by girdling, is known to all intelligent cultivators. It is certainly rather *queer* to see a paper which makes such high claims to science as the Journal of Agriculture, disputing facts such as these.

It is scarcely necessary to inform any of our readers, that the stunting or impeding process may be carried to excess, as it often is in old orchards, and that a greater number of fruit buds are produced, than can be properly developed; and hence the necessity of pruning and of enriching cultivation, to reduce the numbers of the fruit, and increase its size. An over-production of fruit buds will be desired by no good cultivator.

◆

Fatting Hogs on Carrots and Meal.—The *Massachusetts Plowman* makes the following statement, which may be improved to some profitable result by some of the readers of this paper:—"We are using boiled carrots and meal for fatting our hogs, and think they make good food. They are probably worth more than potatoes for fatting, though actual trials are wanted to determine the question."

Heavy Cattle.—Several of the mammoth cattle which have been on exhibition near the Crystal Palace, New-York, during the past season, have recently been slaughtered. The dressed weight of several of them was as follows:—No. 1, 2,178 lbs.—No. 2, 2,066 lbs.—No. 3, 2,024 lbs.—No. 4, 1,930 lbs.—No. 5, 1,860 lbs.—No. 6, 2,008 lbs.—Nos. 7 and 8, "the twins," 1,800 and 1,880 lbs. Nine of them averaged 1,915 lbs.

Sheep Husbandry.

Eds. Country Gentleman :—Thinking it might not be amiss, I avail myself of the present opportunity of making a statement of the profits of sheep husbandry, so far as I have been concerned for the last four years. And as hap-hazard statements and guess-work are not much to be relied on, I propose to give a few facts and figures. I have wintered on an average for the above four years eighty sheep, half to threefourths spanish Merino. The average weight of wool per head has been from three and a half to three and three-fourths pounds per head; and the price per pound obtained, has been from thirty-two to fifty-two cents. The average receipts for wool and increase, taking the amount from actual sales and retaining eighty sheep for the winter stock, have been,

For three years of the last four, per head,......	$1,75
For the last year,...........................	2,63

Cost for wintering.

100 lbs. hay per head,.........................	40
1 peck of corn do..........................	16
Pasturage do..........................	50
Attendance and shearing per head...........	10
Total annual cost per head,.................	$1,16

Which deduct from above, leaves for profits for the three first years, fifty-nine cents—and for the last year one dollar and forty-seven cents per head. I should state that my sheep through the winter have had access to the straw stack, or they would have consumed more hay, and which I have not taken into account as the main object is to have it converted to manure.

My sheep feed from racks under shelter, and have access to pure water passing out and in at pleasure, having salt and ashes once a week. And here I should not omit to state that I have not lost a sheep with disease to my knowledge for the four years above named.

I do not publish this statement thinking the profits very great, for I think with better management much greater profits can be realized—in fact I know of flocks of three-fourths merino which yielded last year five pounds of wool per head. The greatest error that I committed, or that any wool grower can commit, is the disposing of some of the best ewes of the flock. And my advice now from experience is, if you are offered ten or even twenty dollars for your best ewe, don't take it.

Much difference of opinion exists in regard to the different breeds of sheep. So far as profit in wool is concerned I think the Spanish Merino the most valuable as producing more pounds of wool to the food consumed, than any other breed, and being in this section perfectly hardy. And now I would inquire—has there been any experiments correctly and systematically made in regard to the consumption of food by the different breeds, in comparison to number, weight of carcass, wool, mutton, &c.? If some one of our many able breeders, would institue a series of impartial experiments to this end, he might confer a lasting benefit to the farming interest. B. J. Harvey. *Adrian, Mich., Dec.* 23, 1853.

Stabling Cows.

Mr. Tucker :—In the Country Gentleman of Dec. 8th, I notice the inquiry of "A Subscriber," as to how he can prevent his cows from lying in their manure when in the stable, saying he has tried various methods and all to no purpose, &c.

You have toid him that you find it necessary to have the stables cleaned twice a day, and then bed well at night. With due deference to your plan, will you allow me to give the plan I use which only requires one cleaning a day and no bedding, and which I learned several years ago from the late Mr. Phinney, of Lexington, through the columns of the Cultivator.

It is simply to confine my cows with stanchions upon a platform elevated four inches above the gutter immediately behind them.

The platform should be just wide enough for the cows to stand upon and no more, and for ordinary sized cows 4 feet 6 inches is all that is necessary.

My cows are stabled through the winter and never fed out of the stables. They are always dry and clean, and in spring look as clean as if they had not been stabled.

I will here say that I have tried various ways of confining cows in stables, for instance with bows, chains, ropes around the neck with a ring to slide on an upright post—also with ropes around the horns; but for convenience, economy, safety, and comfort of the animal, much prefer stanchions to all others I have ever used or seen. Yours respectfully, Dairyman. *Richfield Springs, N. Y.*

Messrs. Editors :—If "A Subscriber," who, in the 49th No. of the Country Gentleman, inquires how he can keep his cows clean when in the stable, will erect stanchions in which to fasten his cows, and lay a new floor of two inch plank, four feet five inches wide, upon his old one, the difficulty will be obviated, as the droppings from the cattle will fall below and behind the bed on which they lie. I have kept my cows for several years in stables made after the above plan, and they are generally as clean in the spring as when first put up in the fall. J. H. Smith. *Fayetteville, N. Y.*,

Black Leg in Cattle.

In your November number, I noticed a remedy for the black leg in calves, which I doubt not is true; but I have pursued a different method from any given. I have practiced it with success. If the disease has gone too far before observed, the following remedy is not effectual. As soon as the first symptom of the disease makes its appearance, go through with the process of rubbing, punching and rolling, a thoroughly muscular action, with the animal, for fifteen or twenty minutes, and the cure is certainly effected without farther trouble. J. Winthrop. *Montgomery, Nov.* 17.

☞ Breeders of horses are referred to the adverment of Mr. Andrews, in this paper, who, it will be seen, offers for sale or exchange, an imported Cleveland Bay horse. One of this breed, it will be remembered, was recently sold in Kentucky, for $2,800.

Product of Good Cows.

MESSRS. EDITORS—I have kept two cows the past year, of the common or native breed—one ten years old, and the other three years old last April. The heifer dropped her calf the first day of April last, and the old cow the 12th day of the same month. The cows are of medium size. Their food has been pasture in the summer only. In the fall the refuse of the garden, with some apples and pumpkins, and this feed is given them once a day during winter, while they are milked; while they go dry, nothing but hay or cornstalks is given. About the time they are coming in, carrots from half a bushel to three pecks a day are added to their hay for each cow, until they are turned to pasture. Without thinking them very extraordinary cows, we have kept a correct account of all the butter after it was salted and worked; and I find by footing up the account, it is 526 lbs. 10 oz.

I made a trial of each cow the first seven days in June; the old cow made 14 lbs. and the heifer 12 lbs. 5 oz. We have a constant family of six persons.

I have raised two good calves, and with the aid of 15 bushels of corn, have fattened two pigs, which were killed at 9 months and 20 days old, weighing each 289 and 297 lbs.

My advice to farmers is to feed their apples, in preference to making cider to sell or to drink—to pigs or fat cattle all they will eat, and to milch cows half a bushel per day. Yours. A. S. MOSS. *Fredonia, January* 3, 1854.

Winter Food for Milch Cows.

MESSRS. EDITORS—We are engaged in this vicinity mostly in making milk for the New-York market. Anything on the best method of doing this will always make us glad to see the Cultivator, and we should be glad to have you give us the best plan for feeding milch cows in fall and winter. W. B. RICHARDS.

As a general rule, all succulent food, or such as contains large quantities of water, is best for the production of *large quantities* of milk in winter. Most field-roots contain about seven-eighths to nine-tenths water; and these are therfore milk-producers. Bran, largely mixed with water, operates in a similar manner. Still-fed cows are often learned to drink enormous quantities of "slop," and to yield large milkings of a poor, washy unhealthy product. Carrots and cornstalks (the latter being usually quite a juicy food, when the stalks themselves are consumed as when small grown by being thickly sown,) increase the quantity, but still more the richness of winter milk.

For the particular purpose of winter marketing, we hope some who have had experience will give us more particular and accurate details, as but little has been ever given to the public on this subject.

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SHELTER FOR SHEEP.—The Michigan Farmer says that Lewis Cone, (well known as one of the best farmers of Michigan,) out of a flock of about one hundred and seventy sheep, has lost only one in four years. The secret consists in general good management, and especially in keeping his sheep in close quarters during winter, having the stable well littered and always dry.

Culture of Indian Corn.

L. TUCKER—With your permission I propose to give the readers of the Country Gentleman some facts in relation to the culture of Indian corn, as developed in the cultivation of a field of five acres, by myself the present season.

The land was a clayey alluvion, subject to overflow yearly at the time of spring freshets, and had been cropped with grass for a long series of years without interruption, until the previous season, when a part was planted to potatoes, part to corn, part to oats, part to buckwheat, and one-third remained in grass. Of the sward part, about one-half was plowed in the fall and the remainder in the spring; it was all evenly manured at the rate of thirty two-horse loads of stable manure per acre, and plowed about the 15th of May. The ground was all very mellow, and was hoed twice, after passing through it with the cultivator. The crop was cut up at the root as soon as sufficiently glazed, and housed in October. The season was characterized by one of the most severe drouths known for many years, and yet, owing to the character of the soil, the corn leaves never once rolled; but the accompanying swarms of grasshoppers seemed intent on destroying every green thing; like Milton's sunshine, were on "herb, tree, fruit and flower," and destroyed equal to one and a half acres of this crop.

Three hundred and fifty bushels of ears were husked from the lot, not a large crop by any means, but perhaps it is as well to have reports of average crops as of those uncommon and extraordinary large crops, which, "like angel's visits, are few and far between."

The corn on that part planted to potatoes the previous season, was the best, strongest and most luxuriant in appearance, at all stages of its growth. That on the sward plowed in the spring, ranked next, and although of smaller growth was nearly as heavily eared. That part following the corn of the previous season was next in quantity per acre, but falling considerably short of the two plats already mentioned, and nearly equalled by the piece sowed to oats the previous year. That on the ground plowed in the fall was next in order, badly eaten by worms, and in no respect to be compared with that on the sward plowed in the spring. Lastly, that on the buckwheat ground, which was so situated that the crops of the previous year along side it were, on one side grass, on one side potatoes, and the third side corn, yet from the time the corn came up on this plat to the time of harvest, it was of a pale, sickly yellow color, and very small size, while on the three sides aforesaid, the corn was dark green, rank and luxuriant. The yield from this plat was twenty bushels of *nubbins* per acre. Whence I contend that of all *common crops*, buckwheat is the worst to precede corn, although in this case it left the ground in the best tilth of any part of the field. It has been supposed that this crop drew a large portion of its nourishment from the atmosphere, and consequently was not an exhausting crop. From several experiments, I am induced to place it among our most exhausting, or most *poisonous* crops, and from the complaints of some of your correspondents, conclude that others may embrace the same opinion. Is it from its exhaustion of the potash in soils not liberally supplied with this substance, or is it caused by poisonous qualities thrown off by the roots, and which have a deleterious influence on some of the organic elements of the soil? Many of our *old farmers* refuse to raise this crop, although it may be done at times of comparative leisure, for the reason, as they say, *that it is poisonous to the land.* Let us have scientific and practical agriculture *come to terms.* I would also add, on the field were raised 50 two-horse loads of very nice, yellow pumpkins. VERMONTER. *West Pawlet.*

The Housewife.

PRESERVING EGGS.—The newspapers are constantly furnished with new rules for preserving eggs. One of the latest is the following: "Wrap each egg closely in a piece of newspaper, twisting it tightly to keep out the air, place them in layers in a box with the small ends down, and set them where they will be cool without freezing." We have no doubt this is a good way, but it would be nearly as difficult to exclude air by printing paper as by gauze or net work, paper being a very porous substance. *The great secret of success in preserving eggs is to keep the small ends downwards,* the air-bubble which occupies that end supporting the weight of the yolk, and preventing its adhesion to the shell. If the egg is laid on its side, this adhesion will soon take place, and the egg will be spoiled, no matter however completely excluded from the air. Eggs preserved as above, or by packing in salt, or oats, or on shelves purposely made for them by boring with large auger holes, so as to hold the egg upright, without allowing it to pass through, are all good ways, *provided the small end is kept downwards.* There are other requisits that should not be forgotten; for example, the eggs should be quite fresh when packed away, and especial care should be taken that none are cracked, as these soon spoil, and communicate the fermentation to the others if they are in contact or close proximity. Packing in salt is a good way, but it is not so convenient as the others, because the salt is apt to become hardened, and to adhere to the shells. A cool place is indispensible.

SALTING BEEF FOR SUMMER USE.—For 100 lbs. beef take 16 quarts fine Aston sack salt and 4 ounces saltpeter; cut the meat and pack it in edgewise, after rubbing the pieces all over with the salt; and after a layer is completed, take an axe or mall, and pound down solid. Then sprinkle on a little saltpeter and fill up all interstices with salt, and so on until the cask is full. Those who do not like saltpetre may omit it without injury to the meat.

I have salted my beef in this way for fifteen years. It needs no soaking before boiling, and will be tender and sweet the year round. By this way of salting, it makes its own brine, and never wants repacking—nor the brine scalding. If the brine should not cover it in the spring, sufficient may be added for that purpose. A. WANZER. *Sherman, Ct.*

TO MAKE PUMPKIN OR SQUASH PIES.—Stew the pumpkin or squash as dry as possible, without burning; rub it through a cullender or sieve. To a pint bowl full of the sifted pumpkin, add three eggs, one quart of milk; if you live in the country call it a pint of milk and a pint of cream, a small teacup full of sugar, half a teaspoon full of salt, nutmeg, cinnamon or ginger to the taste. The above quantities will make two large sized *good* pies, but if squash is substituted you may dispense with one of the eggs, and half the sugar and have *better* pies; by retaining them and adding two spoonfulls of melted butter, you may have the best pies.

The cooking books prescribe more eggs, to which there is no objection if the quantity of milk is increased accordingly; I have however eaten tolerably good pumpkin pies without any eggs at all.—A HOUSEKEEPER.

Manufacture of Maple Sugar.

MR. TUCKER—On receiving the last number of the Cultivator, I read a notice of the sample of sugar and molasses I sent you. On my return home, I found I was mistaken as to where we obtained the receipt. It was given us by the Hon. J. S. PETTIBONE of this town, and was taken by him from some agricultural work or from a Patent Office report, he is not certain which, but thinks it was taken from the report.

The specimen of loaf I sent you, was merely some made for family use, as we did not design making any for market. The molasses was made from syrup, of which we made about 8 hundred pounds of sugar, or its equivalent in molasses. We have but small works in which we make sugar, from 225 to 240 trees; generally make from 10 to 15 hundred pounds, sometimes less.

I send you the receipt as we make it. Scald the tubs thoroughly in lime water before setting them out, and also when they are taken in, and as often as they may become in the least sour. Boil the sap in a sheet iron pan and caldron, under shelter. When the sap is boiled to syrup, strain it through flannel, and usually let it settle over night. To cleanse syrup, for 50 pounds of sugar, take the whites of 3 eggs beaten to a froth, a teaspoonful of saleratus dissolved in a pint of milk, stir it into the syrup while it is cold, and keep a slow fire until the scum is sufficiently raised to take off; boil down to tub sugar; pour it into the tubs while warm; when it is cold, bore holes in the bottom of the tubs; take white flanel cloths, and wring out in cold water and place upon the top of the sugar, and set it to drain. The cloths should be wet as often as once a day. After a short time, the specks of cleansing remaining in the sugar, and coloring matter, will begin to rise to the top. Take a dry flannel cloth and wipe them from the sugar as often as the cloths are wet, before laying them on.

For loaf sugar the procees is the same, except that it is taken from the tubs, melted and run into tin cans, and drained again, at the same time keeping the flannel cloths on the top of it. WALTER R. DEAN. *Factory Point, Dec. 19th,* 1853.

The sugar and molasses sent us by our correspondent, were the best samples we have ever seen.

The Country Gentleman.

Friends of Improvement!—The Country Gentleman is pledged to you, and, entering upon a New Year, solicits your aid and co-operation. We are engaged in a common work,—with pen and plow we are promoting a common end; shall we not go heart and hand together? We furnish you every week with a rich freight of useful information, collected from diverse sources, still all tending to that one great purpose—*Progress in Agriculture, Horticulture and Social Life.*

But remembering the injunction, "Let another praise thee, and not thine own mouth," we copy the following from the *Windsor (Vt.) Chronicle:—*

> The Country Gentleman.—This admirable paper, conducted and published by Luther Tucker, Esq., of Albany, a tried favorite of the farmers of Vermont, has closed its first year with the honor of having met every reasonable expectation of subscribers, and has established a character of unsurpassed excellence as an agricultural, horticultural and family journal, with admirably filled pages devoted to miscellany and general news.

May we not hope that those who are pleased with us, will afford us some material token of interest in our prosperity. Subscribers are coming in rapidly, and we shall not long be able to supply the back numbers of the present volume. Now is the time to solicit friends and neighbors to make our acquaintance, and we promise our best exertions that no one shall regret having invited the Country Gentleman to his Farm and Fireside.

☞Three copies will be sent for $5.00

What Others Think of Us.—The approbation of those for whose interests we labor, is always gratifying. From the beginning, we proposed to ourselves a higher standard of excellence, both in our Agricultural and Literary Department, than was in vogne among papers which aim exclusively at catching the popular eye and ear, and we were confident that the truest and most lasting popularity was to be attained only by devoting our columns to what was really useful and improving. That we have rightly judged we have daily assurance from all parts of the country.

One correspondent writes us—"I cannot refrain from expressing to you the great satisfaction I have had in reading the Country Gentleman. I consider it the most valuable family paper for the Farmer that I know of, and I cannot doubt but your list of subscribers will steadily, if not rapidly increase. If I can influence any of my neighbors to subscribe to it, I consider I am doing them and their friends a material service.

☞ Will those who contemplate getting up a club for the Country Gentleman please to send in their orders early, so that we may supply the back numbers. It is important to commence with the volume, for every paper is worth preserving, and twenty-six of them bound make a very neat and valuable book.

☞ We want Agents for the Country Gentleman and The Cultivator in every town throughout the country. Post-masters and others disposed to act as local agents, will be supplied with terms, samples, &c., on application.

Portable Cider Mills.

In a late No. of the Country Gentleman you speak of a portable cider mill. If you learn anything further about it, let me know it, and whether it will be in New York for sale. Also which is the best and cheapest in the end for a man to buy, the one you had spoken of before from Penn., and now in New York for sale, or the one you last spoke about. We need such mills in our neighborhood. Yours truly, D. B. Richards.

Will some of our correspondents who have tried the above, please give the results of their experience?

Churns.

Mr. Tucker—As I am commencing the farming business, and wishing to procure a good churn, I should like to know what kind is the best and easiest managed, all things considered, for a dairy of some six or eight cows—where obtained, likewise the price, and by so doing you will confer a great favor on me. William Williamson. *Camden, N. Y.*

We have found Kendall's churn, consisting of a panel and rotary dasher, best for a small dairy, being nearly as simple as the common dasher churn, and working with far less labor. The cost of such a one as our correspondent desires, would be three or three and a half dollars. These churns are sold by Emery & Co., of Albany, and probably at most other agricultural stores.

Removing Old Paint.

Messrs. Editors—Please inform me how to remove paint from a brick wall. The paint was washed from the window sash and frame, by rains. Is there some chemical agent or something to neutralize white lead and oily matter? An Agent. *Berks Co., Pa.,*

When paint becomes hardened by several years' exposure, it is not easily affected by any application. We have never had occasion for any experiments of the kind, but recommend, as promising decidedly the best, a strong and perhaps hot solution of the freshest caustic potash, applied with a swab.

United States' Ag. Society.

The Second Annual Meeting of the United States' Agricultural Society, will be held at Washington, D. C., on Wednesday, February 22d, 1854.

Among the objects of the Association are the following:

The acquisition and dissemination of the best experience in the Science of Agriculture;—

The union of the men who desire to advance to its legitimate rank, this most important of all human pursuits;—and

The increase and extension throughout our country of a more cordial spirit of intercourse between the friends of Agriculture, by whose countenance and co-operation this Society shall be elevated to a position of honor and usefulness worthy of its national character.

Business of importance will come before the meeting. A new election of officers is to be made, and in which every State and Territory is to be represented.

Applications will be laid before the Society for the holding of National Exhibitions in different parts of the Union.

Delegations are respectfully solicited from all the Agricultural Societies in the country, and the attendance of all Agriculturists, who may find it convenient to honor the occasion with their presence.

MARSHALL P. WILDER, *Pres't.*
William S. King, *Rec. Sec'y*

Carrot Butter.

A correspondent of the Dollar Newspaper gives a mode of coloring butter yellow, consisting substantially of the application of a liquid at churning, made by grating yellow carrots, and after soaking in half their bulk of milk or water over night, straining through a cloth. This, we are assured, will make it as yellow as October butter, and with an agreeable flavor. Customers, who buy butter of the manufacturer who furnishes the communication, much prefer this to any other. Some of our readers may think this method worthy of trial; others will prefer a modification, which we have often tried with great success. This modification differs in one particular only, yet has several advantages. The point of difference is in the *time* of applying the carrots;—that is, instead of doing it at the commencement of the churning, by introducing them into the *churn*, we apply them about two or three days sooner by introducing them into the *cow*. This modification has several advantages, namely, saving the labor of grating the carrots; furnishing animal instead of vegetable butter; and nourishing the cow into the bargain.

The Effects of Drainage on Tillage.

Mr. Tucker—Last spring I concluded to plow a clayey field only once for wheat, and that after harvest. The field contained about 40 acres. Previous to draining, it was one of my wetest fields, and in dry weather, even in April or May, was very hard to plow, often having to get the coulters and shares sharpened every day, when we used wrought iron shares. I bought oxen in spring so that I could put a yoke of oxen and a pair of horses to each plow, and owing to the great drouth before, during, and after harvest, I got a large plow made by Messrs. Newcomb & Richardson, of Waterloo, the makers of the Seneca County Plow, so that I could put two or more yokes of cattle and a pair of horses to it if necessary. Immediately after harvest the day of commencement came, when we started for the field, oxen and drivers, plowmen and horses; and besides new shares on the plows, we took 16 other new shares along, expecting to have to change every day. When we got to the field, I had one man put a pair of horses before the large plow, and try to open the land with a shallow furrow. He went 70 rods away and back, without ever a stop, except when the clover choked the plow. I then had the plow put down to eight inches deep, and he went round apparently with the same ease. He then went round at nearly ten inches deep, and no trouble at all. His furrow was about ten inches deep and fourteen wide, and laid as perfect as it could be. I then had one yoke of oxen put behind my smallest horses, and a pair of horses before each of the other plows, and they plowed the field with perfect ease, and only changed shares twice. I never was more agreeably surprised in my life—in fact had they been plowing up gold dust as they do in California, I should have been no more pleased.

Although the field was undoubtedly plowed at the rate of nine inches deep, yet the clover roots went deeper, and the land plowed up as mellow as any loam; whereas had it not been drained it would have broke up in lumps as large as the heads of horses or oxen.

A few years ago, a neighbor broke up a field about the same season of the year and similar land, but not drained; and after cultivating, rolling and harrowing, he had to employ men and mallets to break the lumps before he could get mould to cover the seed; and after all he did not get the third of a crop of either wheat or straw. My wheat looks as well as any I ever saw, and I doubt not but it will be a good crop.

With regard to Newcomb & Richardson's "Seneca County Plow," I think them the best I have ever used. They are of light draught and do their work perfectly. Try them, brother farmers, and if they don't please you, lay the blame to me. They are manufactured at Waterloo, Seneca co. I procured two of them last year, and will get other two this spring. Yours truly, John Johnston. *Near Geneva, Jan.*

Plaster for Peas.

Messrs. Editors—At the request of some of my friends, I send you the result of an experiment I made last season in the use of plaster.

I have used plaster for fifteen years, on all sorts of grain, potatoes, &c., upon all the kinds of soil I possess. But thinking that I derived no benefit from its use on grains, for the last ten years I have only applied it to grass and peas.

I belong to an Agricultural Society, as every farmer should do, and of course intend my crops for premiums. When the committee examined them, I called their attention to the difference in the different ridges of my pea crop—the parts where plaster was sown, exhibiting a dark green and thrifty appearance, while those ridges without plaster, were pale and unthrifty. In harvesting, I cut two ridges of equal size—one plastered, the other not—and threshed them separately. The one plastered yielded one bushel and eighteen quarts, while the unplastered one produced two quarts less than a bushel. John Borrowdale. *Lacole, C. E.*

Vermont State Agricultural Society.

The annual meeting was held at Middlebury, pursuant to notice, on the 5th day of January, 1854. The president in the chair.

The financial report was read, by which it appeared that there was a balance in the Treasury of $1,149.

Hon. E. N. Briggs, from the committee to nominate officers, reported the following nominations:

President, Frederick Holbrook; *Vice-Presidents*, Edwin Hammond, J. W. Colburn, H. B. Stacy, E. B. Chase; *Cor. Sec.*, J. A. Beckwith; *Rec. Sec.*, Wm. Weston; *Treasurer*, Edward Seymour; *Auditor*, E. P. Walton; *Directors*, B. B. Newton, Geo T. Hodges, J. W. Vail, Henry Keyes, John Gregory, A. L. Bingham, John Howe, Jr., O. Wood, Geo. Campbell; and, on ballot, the nominees were elected.

A resolution of encouragement was introduced by James M. Slade, Esq., and passed. Speeches were made by Messrs. Chase, Stacy, Newton, Hodges, Kimball, Stockwell and Slade. The Society adjourned sine die. F. Holbrook, *President*.

J. A. Beckwith, *Secretary*.

Notes for the Month.

MEETINGS OF SOCIETIES.

Annual Meeting and Winter Exhibition of *New-York State Ag. Society*, at Albany, Feb. 7th, 8th and 9th.

The *New-York State Poultry Society* hold an Exhibition at the same time and place.

Annual Meeting of the *United States Ag. Society*, at Washington, Feb. 22.

Exhibition of *National Poultry Society*, at New-York, commencing Feb. 13th.

Annual Meeting and Winter Exhibition of the *Albany and Rensselaer Hort. Society*, Wednesday, Feb. 22.

To Our Readers.

We present our readers this month with a variety and amount of matter which has never, in the history of agricultural journalism, been excelled in value. From the first page to the last, every article will be found freighted with instruction, suggestion and the results of practical experience. We say this not as mere bragadocio, but because we are confident that the careful reading of the contents will convince any one of the truthfulness of the assertion. We are giving the farmer a greater amount of agricultural and horticultural information for FOUR CENTS, than can be obtained in any other form for ten times that sum. In this day of cheap literature, we are endeavoring to furnish truly valuable matter at a rate "cheaper than the cheapest." We are sparing neither labor nor expense to render THE CULTIVATOR as reliable and useful as it was when we received double our present price, and to make it in all respects worthy the confidence and support of the farming community, and fully up to the times. If twelve such numbers as this are not worth many times FIFTY CENTS to the farmer, it must be his own fault. At this exceedingly low rate thousands of copies ought to be circulated, and we cannot conceive how a public-spirited farmer can do his town and the cause of agricultural progress greater service than by getting up a club for the CULTIVATOR.

If the contents of this number meet the approval of our readers, may we not ask the favor of each one to hand it to his neighbor, or to send us his address, so that we can send a specimen copy. With scarcely an exception, every one who writes for a specimen number becomes a subscriber, and we shall be much obliged to any one who will send us the names of those whom they think will be pleased with a journal of the character of the CULTIVATOR. Now is the time to act. As the paper is stereotyped, we can supply orders to any extent. Who will send us the largest list before our next issue?

MONTGOMERY CO. (O.) AG. SOCIETY.—We have been favored by the Secretary of this Society, Mr. O. KITTRIDGE, with its list of prizes to be awarded at its next Fair, to be held at Dayton, on the 3d and 4th of Oct. We notice that its premiums are all to be paid in plate, medals, and books and papers on rural affairs—among the latter were included several copies of the COUNTRY GENTLEMAN.

POSTAGE OF THE CULTIVATOR.—One would suppose that the present post-office law was so explicit that there could be no mistake made about the postage of the Cultivator; but we learn that occasionally a postmaster charges 12 cents a year, while the law rates it at only *six cents a year* to any part of the United States.

POSTAGE TO THE BRITISH PROVINCES.—The United States postage on our papers sent to Canada, New Brunswick, Nova Scotia, &c., and which has to be pre-paid here, is 26 cents a year on the Country Gentleman, and 6 cents on the Cultivator, and these sums should be added to the price of all papers ordered by Agents in those Provinces.

☞ There are a great number of Post Offices on our mail books to which we send only a single copy. A little exertion on the part of the individual might add a few names.

PLASTER ON PASTURES.—A subscriber in Ohio writes us as follows:—"I find the Cultivator of great interest and no small profit. The pasture part of my lot had got thin from constant feeding, and from an article in the Cultivator, I was induced to give it a sowing of plaster in April or May, and was surprised to find to what an extent the grass thickened up, increasing the feed fully one-half. This is only one of many instances of profit to be derived from your journal."

THE PRAIRIE FARMER.—Our correspodent, "H," who wishes to "become more acquainted with western agriculture, and western life," and who inquires if there is a good agricultural paper published in Illinois," has only to address a letter (with $1 enclosed) to the Editors of the Prairie Farmer, Chicago, Ill., to secure the reception of one of the best agricultural journals in the country, east or west.

HOVEY'S MAGAZINE OF HORTICULTURE.—This old and standard work keeps pace with the progress of the times. It has now been published nineteen years, and its volumes furnish the best history of the advancement of horticulture, during that period, in this country, which can be found. No horticultural library can be considered complete without them. The 20th volume was commenced with the Jan. No. Terms, $2 a year.

WEANING COLTS.—P. P. P., of Columbia X Roads, says, "I find it easier, less trouble, and quicker, in weaning colts, to put a headstall upon their heads, with the nose-piece well filled with long, sharpened nails to prevent their sucking, and then let them go with the mare as before. The mare should be milked the same as when separated. The colt will do better because he will spend his time in feeding instead of worrying.

BUSHEL AND ACRE.—Will you inform me through the Cultivator or otherwise, the difference there is in the United States bushel and the English—also, the difference in the acre of the two countries. WM. ARKELL. *Canajoharie, Jan.* 3, 1854.

The standard bushel of the United States is the same as the "Winchester bushel," which was the standard in England from the time of Henry VII. to

1826, and contains 2,150.4 cubic inches. The present standard in England, is the "Imperial bushel," which contains 2,218.192 cubic inches, being, within a fraction of, 68 cubic inches larger than that of the United States. The *acre* is the same in both countries.

WOODEN BLOCKS IN WALLS.—How will blocks of wood of any size laid in water lime cement, like square stone, answer for cellar walls or underpinning to any building? JAS. H. MATTISON.

Blocks of wood built in on the inner side of the stone walls of buildings, whether with common or water lime, will last hundreds of years, provided they are excluded from dampness. In *damp* cellars, they would be more apt to decay, unless of very durable wood, but in most cases would be very durable.

MOWING MACHINES.—Will you please to inform me which is the best and the cheapest Mowing Machines, and where they can be bought. D. C. S. *Middletown, Ct.*

The best, undoubtedly, is Ketchum's; the price, $110. For further information, address H. C. WHITE & Co., of Buffalo.

OSIER WILLOW—*X. Udall*, Wolcott, Vt.—You will find your questions answered on page 328, last vol. of Country Gentleman. See also pages 66, 114, 180 and 242, of the first vol., for additional information on the subject.

SPAYING COWS—*A Subscriber*.—Address WILLIAM CARTER, East-Bloomfield, N. Y.

POULTRY.—*J. T.*, Litchfield county, Conn., inquires for the best variety of hens for laying—their color, quality of flesh, general size and habits—how many eggs fifty or sixty would each lay per year—where they can be had, and at what prices. Will some or our poultry fanciers answer?

FINE PIGS.—A friend at Coxsackie, sends us the weight of a litter of pigs recently slaughtered by ROSWELL REED of that place. They were nine months old, and weighed 400, 382, 364, 324 and 312 lbs. respectively, making a total for the five, of 1,782 lbs.

DUCKS—J. Y., Memphis, Tenn.—We know of no such Ducks as you inquire for, in this vicinity. Perhaps you can procure them by addressing Mr. J. S. CLARK, Throopsville, Cayuga Co., N. Y.

TRAINING STEERS.—We cannot understand "I. FORGOTS'" directions. How are the steers to be confined and where? Are they to be placed between the wheels and to go round in a circle?

HEAVY SHEEP.—A London correspondent of the National Intelligencer says he had heard much of the great weight to which sheep are sometimes fed in England, and his belief was really staggered by some of the reports; but he saw in one butcher's shop, four sheep, which had been raised and fed in Gloucestershire, whose weight when slaughtered and dressed for sale as mutton was 250, 245, 216, and 197 pounds respectively. A shoulder, cut fairly from the largest, weighed 42½ lbs. Two Lincolnshire sheep in the same shop weighed 216 and 201 pounds respectively.

THE GENESEE FARMER—A QUEER BLUNDER.—The American Agriculturist copies from the Genesee Farmer the claim of the latter paper to the paternity of several of of our best rural periodicals, and among the rest to that of the Albany Cultivator itself. Those papers appear to understand, and all their readers certainly will, that the *present* Genesee Farmer, and the present Albany Cultivator are intended in all these remarks.

The Agriculturist thinks that DR. LEE, the proprietor of the Farmer, may "be allowed a little self-complacent boasting"—to which we must add the remark of a well known writer, "but if thou boast, thou bearest not the root, but the root thee;" for it so happens that the present proprietor of the Cultivator himself originated and published the Genesee Farmer for nine years, and afterwards upon the death of Judge Buel, merged it in the Cultivator, started at a later day. The Genesee Farmer was not sold out to any one; but after its union with the Cultivator, another and TOTALLY DISTINCT paper was commenced at Rochester, called the NEW *Genesee Farmer*, which openly diclaimed at its commencement all attempts to assume any benefit from the Genesee Farmer or its name, but commenced entirely new. After some years, the distinctive epithet "*new*," was dropped, which now our friends abovenamed seem entirely to have forgotten. We do not mean to say that the son claims the paternity of the parent, for the two papers,—the Genesee Farmer which is called the "stepping stone to the Cultivator," &c., and the present Genesee Farmer, have no relationship, except that the latter has "borrowed" the name of the former. We mention these facts merely to correct an obvious error, with entirely friendly feelings to the Farmer and Agriculturist, who will, we doubt not, now recollect these facts.

GUANO AT THE SOUTH.—Our readers are no doubt aware that guano has been for some years very successfully used in Maryland and Virginia, more particularly for the wheat crop. The American Farmer says that in some districts, it has so increased the fertility of the land, and its consequent products and profits, as to increase the value of land one hundred per cent. It appears to have produced the most striking results on the old worn-out lands of those states. Lands producing only six bushels of wheat to the acre, and which could not be sold for five, have, by means of an annual application of four hundred pounds of guano, yielded as heavy crops as lands selling at fifty to seventy-five dollars per acre.

PREMIUM FOR A SEEDLING GRAPE.— At a meeting of the New-York Hort. Society, Mr. P. B. MEAD placed at the disposal of the Society a goblet—value $25—as a premium for a new seedling grape, to be competed for at the September exhibition. His object in doing so is to encourage the growth of native fruits, and as an example, with the hope that some of the wealthy merchants of that vicinity might be induced to patronize this branch of industry as did those of Boston, Philadelphia, and other cities.

Poison in Guano.—A subscriber at Newark, N. J., sends us the following, which he translated from a late Dutch paper: "One of the custom officers stationed at Kaldenkirchen, near Venlo, Holland, had a slight wound in the fore finger, caused by a thorn in shearing a hedge. The wound was nearly healed, when, receiving some guano, he was so incautious as to work the stuff with bare hands. That was at 3 o'clock P. M.—at 4, the whole hand was swollen—at 5, the arm to the elbow—at 6, the whole arm and a part of the chest were in a state of high inflammation, and at 11 o'clock the same day, the poor wretch was a corpse, notwithstanding the aid of two skillful physicians. It appears, therefore, that the guano contains some very venomous particles, and that people cannot be too careful in using that stuff."

American Agriculturist *vs.* Humbugs.—We are glad to see our cotemporaries coming out in favor of a high order of literature, and taking a bold stand on the side of right and truth. The American Agriculturist, in a most capital announcement for the coming year, says "that the humbugs and nostrums afloat in the community will be tried by reliable scientific rules, and their worthlessness exposed."

This is well, just as it should be; and as we are a little in the same line of business, we beg leave to call its attention to the following item which we take from the Agriculturist's own advertisement, and request it to expose the humbug among the first. The Publishers say that the Editors "will be assisted by Prof. Nash, who has been for a long time one of the most successful farmers of New-England, and is now Agricultural Professor of Amherst College."

Now Prof. Nash is engaged as a contributor to the Country Gentleman, and assures us that his name is announced without his permission in connection with the Agriculturist, he having only replied to the solicition of the Publishers that "*perhaps* he would furnish an article or two."

General Index to the Cultivator.—*Mr. Tucker:* I have, as you know, called your attention to the subject of getting up an index for all the back volumes of the Cultivator. Such an Index, if prepared in a suitable manner, would be of great value, not only to those who possess the whole work, but to all who read much upon rural subjects. D. B. *Waterford, N. Y.*

To prepare an Index to the twenty volumes of The Cultivator now published, in such a manner as to make it really valuable, would require a vast amount of labor—far more than we should be willing to undertake, even were the prospect of the demand for such a work more favorable than at present. The other suggestion of our friend, in relation to a book, we may hereafter, very probably, carry into effect.

Good Pigs.—Mr. T. H. Austin of New-Haven, Oswego county, recently slaughtered seven pigs of one litter, 16 months old, which weighed as follows—400, 404, 404, 416, 476, 511, and 557 pounds—total 3,168 lbs. This shows that Mr. A. knows how to make pork.

Great Yield of Barley.—The *Pacific*, a San Francisco paper, states that Sweet & Keatings have raised on their farm at the Salinas Plains, Monterey county, one hundred acres of barley, an average acre of which being measured and weighed, yielded 7,473 lbs.; which, at 50 lbs. per bushel, gives 149 23-50 bushels per acre. That portion of the crop of forty-five acres, from which the sample was taken, was sown the 20th of April, 1853; amount of seed, 125 lbs. to the acre. This is believed to be a greater yield by at least forty bushels, than has heretofore been made public.

Virginia State Ag. Society.—We recently alluded to the eminent success which crowned the labors of this Society at its late State Fair; and for which, as we learn from a friend in Virginia, they were indebted, mainly, to the untiring zeal and energy of Gen. Wm. H. Richardson, of Richmond, who has acted the past year as its general agent, and to whom it is proposed to "present some solid and substantial token of gratitude, for his invaluable services in that capacity."

New-York Ag. College.—In answer to the inquiry of "A Subscriber," at Farmington, Conn., we would state that at a meeting of the Trustees, held in this city last week, it was resolved not to give up the effort to carry this projected institution into operation. Mr. Delafield's death was a severe loss to the corporation—one which, it was thought by many, would prove fatal to the enterprise; but it will, we trust, only delay it for a season

Ohio State Board of Agriculture.—At the annual meeting of delegates from county societies, recently held at Columbus, James L. Cox, of Muskingum; R. W. Musgrave, of Crawford; Jos. Sullivant, of Franklin; Buckley Sledman, of Cuyahoga; T. R. Grier, of Hamilton, were elected members of the Board to supply the place of others whose terms had expired. The new Board subsequently met, and organized and appointed the following officers for the ensuing year.

President, R. W. Musgrave, Sulphur Springs; *Treasurer*, Joseph Sullivant, Columbus; *Recording Sec'y*, Jas. L. Cox, Zanesville; *Corresponding Sec'y*, Geo. Sprague, Tiffin.

Variable Wheat Years.—The North British Agriculturist states some facts showing the variable seasons at East Lothian, by which we perceive that notwithstanding the celebrity of that region for heavy crops, there has been more failures there than farmers would expect in the wheat regions of this country. In the years 1827—8, 9, 30, and 31, the average produce did not exceed 15 bushels per acre, in consequence of mildew and the wheat midge. In 1832, 3, 4, 5, and 6, the produce on many farms was 44 bushels per acre, and the average 35 bushels.

Fancy Rabbits.—Those wishing to procure fancy lop-eared Rabbits, are referred to the advertisement of S. V. C. Van Rensselaer. They are raised from Imported Stock, and are said to be very fine.

Evergreen and Deciduous Trees.

HENRY LITTLE & CO., of Bangor, Maine, will furnish Arbor Vitæ, Balsam Fir, Spruce, Hemlock, and other trees, and forward them by steamers or railroads to any part of the United States, at their usual prices.

Jan. 20—w3ms

Grafts of all Superior Fruits,

IN any quantity; cuttings of Currants, Gooseberries and Raspberries; cuttings of all Ornamental Trees and Shrubs that can be propagated by this mode.

50,000 Scions of the finest Osiers, at moderate rates.
75,000 Cuttings of Angers Quince, sure to grow, and may be budded to pears the first season.
20,000 Isabella, Catawba, and Clinton Grapes, and of all the finest foreign varieties.

The above can be supplied during the winter and in the spring. Every variety of Fruit and Ornamental Trees and Plants, for which contracts will be made now at reduced rates. WM. R. PRINCE & CO.,
Linnean Gardens and Nurseries, Flushing, N. Y.

JOHN SAUL,

Washington City, District Columbia,

HAS to offer to his patrons and the public the subjoined list of Nursery Stock. The whole is of the finest description, in the best order, and will be sold reasonable:

200 Cedrus Africana, 6 to 9 and 12 to 18 inches.
1,000 Cedrus deodara, 1 year seedlings,
500 do do 6 to 9 and 12 to 18 inches.
200 do do 2 to 3 feet.
500 Funebral Cypress, 4 to 6 and 6 to 9 and 9 to 12 inches.
1,000 Junipers, English, 6 inches.
1,000 do do 1 to 2 and 2 to 3 feet.
1,000 Pinus excelsa, 1 year seedlings.
500 do 9 to 12 and 12 to 24 inches.
8,000 Scotch Fir, 8 to 9 inches.
200,000 Silver Fir, 4 to 5 and 6 to 7 inches.
50,000 do 7 to 8 and 8 to 9 inches.
10,000 do 1 to 2 and 2 to 3 feet.
2,000 Silver Webbiana, 4 to 5 and 5 to 6 inches.
500,000 Norway Spruce, 4 to 6 inches,
500,000 do do 6 to 8 inches.
50,000 do do 9 to 12 inches.
10,000 do do 1 to 2 and 2 to 3 feet.
3,000 English Yews, 6 to 9 and 9 to 12 inches.
1,000 Irish do 1 to 2 feet.
10,000 Larch, European, 4 to 6 inches.
20,000 do do 1 to 1½ and 2 to 3 and 3 to 4 feet.
3,000 Red Dutch and Grape Currants.
2,000 Victoria or Houghton Castle do.
2,000 White Dutch and Grape do.
2,000 Black Naples do.
10,000 Gooseberries, best Lancashire varieties.
5,000 Fastolff Raspberries.
4,000 Red and White Antwerp, Magnum Bonum do.
2,000 Plums, all the leading varieties, strong.
80,000 Pear Stocks, 1 year, strong.

Catalogues can be had on application. Jan. 20—m1t.

Isabella Grape Vines,

OF proper age for forming vineyards, cultivated from, and containing all the good qualities which the most improved cultivation for over fourteen years has conferred on the Croton Point Vineyards, are offered to the public. Those who may purchase will receive such instructions for four years, as will enable them to cultivate the grape with entire success, provided their locality is not too far north. All communications addressed to R. T. UNDERHILL, M. D., New-York, or Croton Point, Westchester Co., N. Y., willl receive attention. The additional experience of two past seasons, give him full assurance that by improved cultivation, pruning, &c., a crop of good fruit can be obtained every year, in most of the northern, and all the middle, western, and southern states.

N. B. To those who take sufficient to plant four acres, as he directs, he will, when they commence bearing, furnish the owner with one of his vinedressers whom he has instructed in his mode of cultivation; and he will do all the labor of the vineyard, and ensure the most perfect success. The only charge a reasonable compensation for the labor. R. T. U.

Jan. 20—m2t—w2tF&4tM

Willow Cuttings and Raspberries.

FOR sale, cuttings of the three best varieties for American culture, (*Triandra*, *Forbyana*, and *Purpurea*,) for account of which see Country Gentleman of November 27th.

Also, Hudson river Antwerp Raspberries of excellent quality. CHARLES DOWNING,
Jan. 19—w4tm2t Newburgh, Orange Co., N. Y.

The Cranberry.

THE subscriber has now works from the press in relation to Cranberry Culture, and forwards, to all applications, free of charge. Also, has Plants for sale, and will forward, to all orders by express, in a fresh state.

Address SULLIVAN BATES,
Jan. 5—1—1t Bellingham, Norfolk co., Mass.

Fruit and Ornamental Trees, &c., &c.

THE subscribers have the pleasure of announcing an immense stock of trees, &c., for the spring trade—embracing:

Standard Trees for Orchards.
Dwarf and Pyramidal Trees for Gardens.
Ornamental Trees for Streets, Parks and Pleasure Grounds.
Rare and beautiful Lawn Trees.
New and rare Weeping Trees.
Evergreen Trees, embracing the rarest species of Pines, Firs, Spruces, Yews, Cedars, Junipers, &c.
Hardy Flowering Shrubs.
Roses, of all classes, and embracing the newest and best sorts.
Dahlias, the finest English prize sorts.
Chrysanthemums, including the finest of the new Pompone varieties.
Phloxes and Pæonies, superb collections.
Bedding Plants, a complete assortment.
Hedge Plants.
Box Edging.
Rhubarb, Asparagus, &c., &c.

All orders, whether for large or small quantities, executed with the greatest care, and in strict compliance with the wishes of the purchaser. Packing done in the most secure and skillful manner, so that parcels can be transmitted thousands of miles with safety. Nurserymen and dealers in trees will be supplied on the most liberal terms

The following Catalogues are sent *gratis and pre-paid* to all who apply and inclose a postage stamp for each.

No. 1. Descrip. Catalogue of Fruits.
No. 2. do. do. Ornamental Trees, &c.
No. 3. do. do. Dahlias, Greenhouse Plants, &c.
No. 4. Wholesale Catalogue.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.
Feb. 1, 1854—m2tw2t

Fowls and Eggs.

THE subscriber has a very choice selection of Fowls that he will breed from the coming season, of the following varieties:—Royal Cochin China, white, black, buff and brown—Brahma Pootra, or Chittagong, Black Spanish, Bolton Grey or Creole, Gold and Silver Poland. All of the above breeds are pure and very large. Those who want Fowls or or Eggs of any of the above breeds will find fowls at moderate prices, and eggs at $3 per dozen. All orders post paid. Eggs carefully packed to send by express, according to direction. GEORGE ANDERSON,
Jan 19—w2tm1t 56 Schuyler street, Albany.

Brahma Pootra Fowls and Eggs for Sale.

THE subscriber offers for sale the most beautiful Brahma Pootra Fowls that can be found in the country. Also, Eggs from the same fowls next spring and summer. Price of fowls, $10 to $50 per pair; eggs, $6 per dozen.

Also, buff colored Shanghais and Eggs.

Fowls cooped and Eggs carefully packed in spring boxes, and sent to all parts of the country, by addressing, post paid,

E. GILES,
Jan., 1854—m2t Sauquoit, Oneida Co, N. Y.

Eggs for Hatching.

THE subscriber offers for sale, during the coming season, Brahma Pootra Eggs for hatching, at $4 per dozen, sent to any part of the United States or Canadas. Expenses paid to New-York, Albany or Boston.

My stock is inferior to none in the United States.

Any one purchasing Eggs of me, that is not pleased with the chicks in the fall, the money will be refunded.

Reference will be given if required.

DARIUS GARDNER,
Jan., 1854—m4t Norwich, Conn.

For Sale or Lease,

5.000 ACRES OF CHOICE FARMING LANDS in Gallatin county, Illinois, in the immediate vicinity of the extensive Mining operations of the Shawnee Coal Company. A cash market for all kinds of farm products at the mines. These lands will be sold or leased to good farmers on accommodating terms.

For particulars, apply to H. H. CASEY, Sec'y,
Corner Hanover Square and Pearl street.
New-York, Feb. 1, 1854—m5t

New-York Agricultural Warehouse.

HORSE Powers, Threshers, Fan Mills, Smut Machines, Grain Drills, Hay Presses, Grain Mills, Corn and Cob Crushers, Cider Mills, and a large assortment of Plows and all kinds of Agricultural and Horticultural Implements.

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Utica, Nov. 1, 1853.—m3t

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Contents of this Number.

"We have compassed this mountain long enough,"... 41
Answers to various Inquiries,... 42
The Michigan Plow—Destroying Sweet Flag—Plowing in Weeds—Theories and Experience, by G. E. H. 43
Culture of Indian Corn, by F. Parlin,... 44
Self-Sharpening Yankee Feed Cutter, by A Subscriber—Information Wanted, by S. Deming,... 45
Fall and Winter Plowing, by S. E. Todd,... 46
Raising Poultry, by A Reader—Composition Roofs—Lime on Corn by R. F. Bingham—Old Colony Sweet Corn,... 47
Gibbs' Rotary Spade—Valparaiso Squash, by V. W.—Shell Marl, &c.,... 48
Timothy Hay, Farm Rollers, and Boiling Feed for Stock, by J. L. Moore—Apple Tree Hedges,... 49
A Reform Needed—Kentucky Corn Crop,... 50
Plans For the Year,... 51
Preparation of Bones For Manure—Drawing Manure in Winter,... 52
Albany Co. Ag. Society—Roofing for Buildings, by L. V. W.,... 53
Helderburgh Farming, by G. W. Durant,... 54
Experiments with Superphosphate of Lime, by L. Butterfield,... 55
Design for a Farm House—Grafting the Peach, by Dr. Gibbs,... 56
The Corymb-flowered Habrothamnus, E. S.—Mulching in Winter—The Hardy Dwarf Orange—Strawberries in Winter,... 57
Early Tillotson Peach—Native Localities of Fruits—Large Pears,... 58
Quince Stocks—Pears and Peaches for Vermont—Foreign Grapes,... 59
Winter Pruning, by E. S.—Fruits Free from Rot—Flowers for the Shade—Manure for Fruit Trees,... 60
A Cheap Green-House—Production of Fruit Buds,... 61
Sheep Husbandry—Stabling Cows—Black Leg in Cattle,... 62
Product of Good Cows, by A. S. Moss—Winter Food for Milch Cows—Culture of Indian Corn, by Vermonter,... 63
The Housewife—Manufacture of Maple Sugar, by Walter R. Dean,... 64
The Co. Gentleman—Portable Cider Mills—Churns—Removing Old Paint—United States' Ag. Society,... 65
Carrot Butter—The Effects of Drainage on Tillage, by John Johnston—Plaster for Peas, by John Borrowdale—Vermont State Ag. Society... 66
Notes of the Month, &c.,... 67

ILLUSTRATIONS.

Gibbs' Rotary Digger,... 48
Plan of a Country House,... 56
The Corymb-flowered Habrothamnus,... 57
A Hardy Dwarf Orange,... 57
Foreign Grapes,... 59
Winter Pruning,... 60
A Cheap Green-House,... 61

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Prof. GEORGE W. PLYMPTON, Instructor.

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January 5.

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I HAVE three one-year old Bulls for sale, got by my imported bull Vane Tempest—colors, roan and red.

Also, a few pairs of choice Suffolk Pigs bred from my imported stock. J. M. SHERWOOD,
Jan. 20—w3tm2t Auburn, N. Y.

Thorough-Bred Short-Horns for Sale.

A VERY fine young roan bull, calved June 3d, 1853, got by Mr. Vail's American Comet 2d, (who was got by Prince Leopold, dam Hilpa 3d by Duke of Wellington, (3,654) gr. d. imported Hilpa by Cleveland Lad, (3,407) &c., &c. Prince Leopold was got by the Bates prize bull Meteor, (11,811) d. imported roan cow Flora, by Imperial, (2,151) &c.) The Dam of the young bull is Lady Bird, who was got by the Bates bull Eclipse, bred by Mr. Vail, and got by Meteor, (11,811) out of imported Arabella, bred by Mr. Bates, and got by 4th Duke of Northumberland, (3,649) g. d. by Duke of Cleveland, g. g. d. by Belvidere, (1,706) &c., &c. His gr. dam is Fillpail 2d, by Gen. Van Rensselaer's Ajax—g. g. d. by imported Copson, (3,482)—g. g. g. d. by imported Comet, by imported Nelson, &c., &c

Also, three very fine young heifers, calved during May and June last, all descended from Mr. Vail's imported stock, crossed upon that of Gen. Van Rensselaer, very desirable for breeders, &c., full pedigrees of which will be furnished if requested. Dr. HERMAN WENDELL.
Albany, Jan. 9, 1854—w2tm1t

Short-Horns.

I HAVE on hand and for sale two Short-Horn Bull Calves, of good pedigree and fashion. JOHN R. PAGE,
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I HAVE two full-blood Devon Bull Calves for sale. They were sired by Champion, the bull which received the first prize at the New-York State Fair at Utica, and a portrait of whom was published in the Cultivator for December, 1852.

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Apply by letter or personally to the Lodi Manufacturing Co., 74 Courtland street, New-York.
Jan. 19—w4m—m4t

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Agriculture, Horticulture, and Domestic Economy.

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THE CULTIVATOR.

FORBES. VAN VRANKEN, N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

VOL. II. ALBANY, MARCH, 1854. No. III.

National Consumption of Crops.

It is said that great men, when they fall into error, make the greatest blunders; in the same way, we suppose, that a big cannon, pointed wrong, will carry its shot further out of the way than a mere pop-gun.

We have been reminded of this admitted truth, in observing the anxiety of the British political economists in devising some means to remove the necessity of such large importations of grain. Notwithstanding that the wheat crop of England is some two hundred millions of bushels, a deficiency, requiring a corresponding supply from other countries, has annually occurred of late years, amounting to some 40 million bushels. For the coming year, it is estimated at over eighty millions at the very least. To lessen this deficiency or to prevent its increase, a great deal of wisdom has been brought to bear, and with great success in every direction *but one*, by the most eminent British statesmen and agriculturists. Enterprising farmers have introduced the best known systems of cultivation; and in addition to the careful manufacture of manure, bones have been largely imported from the continent, and millions in value of guano from South America. The Mark-Lane Express has lately taken up another branch of the subject for the purpose of effecting a saving in the consumption of grain. The amount invested in *horses* in Great Britain and Ireland is estimated at 300 millions of dollars; and it is supposed that these are actually employed but one-third of the time—leaving about 200 millions unproductive. The horses employed in agriculture alone are supposed to consume eighty million bushels of oats annually, (making no account of the amount of grass and hay required besides, for their support,) which if produced in the shape of human food, would more than supply the national deficiency; and suggestions are made on the reduction of horses by a more economical system of agriculture, and especially by the employment of steam power for all the practical purposes in farming of which it may be susceptible.

It seems absolutely astonishing to any one not acquainted with the tenacity with which the English hold fast to the habit of BEER-DRINKING, that the enormous consumption of grain in this worse than useless beverage, should not engage more attention. We have not now at hand the statistics showing the amount of this consumption; but when we reflect on the millions of laborers that daily use large quantities of beer with their meals and otherwise, year in and year out, it becomes self-evident that the amount consumed in the manufacture of this drink, must far exceed the present deficiency in the wheat crops of the British kingdom—a manufacture which, as chemical analysis has shown, nearly destroys all the nutriment of the grain, and, converting it to a mere stimulant, increases the strength of a laborer about as much as a whip increases the strength of a feeble horse.

Independently of the mere consumption of grain, so great is the injurious results produced by this practice, that many have attributed the degradation of a portion of the English laborers, to the British aristocratic system. We are sorry to see that one of our own countrymen,—the editor of the Michigan Farmer,—has fallen into this mistake, and written a book called THE MUD CABIN, unwisely attacking the most liberal government in Europe, as the cause of this degradation, and almost the only one where knowledge is generally diffused among all classes so far as they choose to acquire it, and where a man may say his soul is his own, without endangering his liberty or his head. The editor of the Ohio Cultivator, who has spent many years at different periods in England, assures us he is satisfied that this debasement and ignorance is to be mainly attributed to the beer soaking system.

It should be the aim of wise men to learn from the defects and omissions of others; and if British statesmen overlook the bad effects of converting a hundred million bushels of grain into diluted alcohol, it is worth while to inquire whether we are not suffering from a similar cause. Farmers have been led to regard distilleries as very profitable markets for some of their grains, but in doing so they appear to overlook some important considerations. It may be laid down as a principle, in the first place, lying at the foundation of national and individual prosperity, that a loss sustained by any considerable portion of commercial society, is felt more or less through all the rest. If the farmers' profits are lessened, traders will immediately find a curtailment in the amount of their business; if merchants are compelled to incur heavy expenses, the farmer must of course pay more for all his purchased goods. If fifty million dollars' worth of grain is destroyed by distillation, the loss cannot fail to be felt by the country at large; although large profits may be reaped by the few individuals engaged in the manufacture, a small portion of which may be divided among the farmers. Yet these very farmers lose tenfold more by the general depression in the prosperity of the country, occasioned by this waste, and by the consumption of the products of distilleries, producing a crippled enterprise among the consumers. Incontrovertible statistics also prove that for the support of pauperism, and of criminal justice, occasioned immediately by this cause, requires a draught on these very farmers far greater in amount than all their profits from distillers' markets, amounting to some two-thirds or three-fourths of all their taxes, and to many millions of dollars in the aggregate annually. We have already published a statement showing that the decreased reputation in Ohio pork in market, occasioned by the fact that a portion of it is known to be still fed, is not less than one dollar per barrel on the whole quantity raised and sold.

No reasoning can be more erroneous than to suppose that one considerable portion of the people may be permanently benefited at the expense of another portion. When general prosperity prevails, and schools, facilities for market, and neighborhood conveniences, are every where provided, society at large is constantly benefited in a way that could never take place in the midst of a debased and slip-shod population. Many of our countrymen suffer a serious loss by allowing selfishness and narrowed enterprise to exert their constant influence over them. Could the feeling be more generally prevalent, that whatever promotes the general prosperity never fails to re-act on individuals, it would certainly contribute largely to the benefit of all. The whole of this subject, embracing all its aspects, is eminently worthy of the consideration of the farming population of this country.

◆

Cheap Cisterns.

I was induced to construct a cistern on my farm because I was told it could be done very cheaply, without plank or brick, and accordingly had one made in the fall of 1852, and I have found on trial that it answers the purpose, being very convenient to the kitchen.

The contractor agreed to make it for five dollars, exclusive of cement, and did so by constructing a funnel of sufficient size of red clay, wide at the top, and coming to a point at the bottom, this he coated with cement. which cost in this place four dollars, and the cistern was done, excepting the flooring and pump, which were an additional expense.

I am told there are cisterns on some of the farms of this county, made in this way, which have been in use ten or fifteen years, and are good yet. It is probable they may be in use in different parts of the country, but many may not know that they can have an abundant supply of rain-water at their kitchen doors for so small a sum. J. H. *Carlisle, Pa.*

Notes on Farming.

Messrs. Editors—Having been under your tuition for fourteen years. I wish to assure you of the gratifying results which have followed the reading of the Cultivator. I came on to my farm in 1839, which was one of the best wheat seasons we have had from that time to this; yet my wheat crop that year, of six acres, averaged but 13 bushels per acre. In 1852, I cut 12 acres, which averaged 19 bushels; and in 1853, 22 acres, which produced 263 bushels by measure and 278 bushels by weight of 60 lbs., or nearly 22 bushels per acre. If I had sowed all Mediterranean wheat, the average would have been three or four bushels more; but I had three acres of what is here called "Riley wheat," which was badly cut by the fly; and 2½ acres of a wheat that I would be glad to know the name of. It grew six feet high, with strong bright stem, broad leaf, light green, head broad and flat like barley, with long beard and large grains. It was eight days later than the Mediterranean, but entirely escaped the fly. This 2½ acres was not half thick enough on account of the seed having been badly broken by the threshing machine. Part of this crop was grown on land which has been cleared forty years, and was considered as worn-out when it came into my possession. I believe it was the best crop grown in this township last year on old land. John Conway had 30 acres of wheat on new ground, which averaged 43 bushels per aere, white wheat.

For wheat, I generally plow twice; once in June, and then in September, just before sowing. One advantage of plowing in June, is that the ground is then soft, and one pair of horses can plow 6 inches deep with ease, whereas in September, if the summer has been dry, it is hard work to plow three inches deep.

In a late number of the Cultivator, you instanced the good effects of digging clay from pits and spreading it over the surface. A neighbor of mine told me he practiced this in Ireland, with great advantage to the oat crop. You also stated that a man had said that he wished some one would haul three inches off the top of his land, as he knew that he had a better soil below. This is the opinion I had of my land, and I expected by plowing six inches deep, to turn down the three inches of worn-out top, and bring up three inches of a better soil. Then harrowing and plowing again, and harrowing again after sowing, will mix the two, and give an improved soil and greater depth. In place of hauling clay over the surface, I tell my boys, when plowing for wheat, to try to turn up some of the red clay sub-soil.

I want to make a comparison between my next neighbor, who I could never get to take the Cultivator. He always considered his farm superior to mine. He had the past season seven acres of wheat, and all it produced was 73 bushels. I had 14 acres of corn on one of the oldest fields, which produced 50 bushels per acre; his not the half of it. My corn got 246 wagon loads of manure. His wheat got some, but his corn very little. I feed all my hay and corn; he sells nearly all of his. I cut up all my corn, and feed fodder in the yard; he seldom cuts up any. John J. Craig. *North Madison, Ind.*

Letters on British Agriculture—X.

FIELD CULTURE.

AMHERST, Jan. 12, 1854.

L. TUCKER, ESQ.—You could not travel through the counties of Great Britain, with an eye open to what her farmers are doing, without perceiving that great attention is given—more, I think, than with us—to bringing the soil to a fine tilth.

You would find, however, if you were to cross the British channel, and to spend a few weeks among the continental farmers, that some of the Belgians, if no others—excel the English in the depth and fineness, and almost perfect uniformity, with which they pulverize the soil previously to putting in the seed.

In speaking therefore of the *field culture* of British farmers—their *plowing*, *clod-crushing*, *harrowing*, *pulverizing* the soil finely, *mixing* it thoroughly, *distributing the manure evenly*—I am obliged to say, that, while they excel us, they are excelled by some at least of their neighbors; and as I before stated, that, if they would husband their home fertilizers as well as their Belgian neighbors do theirs, they would have less need to import guano; so I will now express a confident belief, that if they would work their fields as well as these same neighbors work theirs, they would need to import some millions of bushels less wheat. They have worked their fields *well*, and have received a *great* reward. They might have worked them *better;* and if they had, would have received a *greater* reward.

With them, labor is plenty and cheap; with us, it is scarce and dear; while on the other hand, produce is always higher there than here. These circumstantial differences have an important bearing on the question of applying labor plentifully in order to make the tilth perfect. Suppose you have a field essentially ready for sowing, plowed, harrowed and brought into a tolerable condition for receiving the seed, but such nevertheless, that another day's work to the acre would be likely to give an extra bushel of produce for each acre in the field. Shall the extra day's work be applied, with the hope of an extra bushel? This question might receive a different answer on the two sides of the water; for there the extra bushel would be pretty sure to be worth more than the day's work would cost, while here it would be about as sure to be worth less, and although I would not encourage careless tillage on the ground that produce will be low, yet I see not how the American farmer can afford to lavish as much labor on his fields as the English, or I would rather say, I see not why the English farmer should not apply more labor, and aim at a more perfect cultivation than the American, since the investment of the former is more in land and less in labor than that of the latter. I had reasoned thus before visiting England; and I was prepared to see a more perfect cultivation than I had seen at home. In this I was not disappointed. English field culture is better than American; and yet when we take into view the differences in the value of land and in the prices of labor and produce, it is not surprising that they are in advance of us. The wonder is rather that they are no more in advance, and when among them I could not but *think*, and was sometimes tempted to *say*, "*you* are tall farmers, but *we* are as tall *of our age*."

Of the means for bringing the soil into good tilth—a thing about which you hear a great deal said by English farmers—I will speak in the order already indicated.

1. *Of Plowing*. In this I do not think they have the advantage over us. Of agricultural implements I intend to speak more fully in another place. I will only say here, that our plows are not more than half as heavy as theirs, cost about half as much, and will last nearly as long, but would be cheaper if they lasted only one year, so much lighter of draft are they, and so much more effective with an equal strength of team. The tenacity with which Englishmen hold on to the old iron plow, a rod long, and heavy enough to load a pretty good team, irrespectively of all pressure from the soil, is truly wonderful. If you speak to them of these plows being heavy, they uniformly say, "Oh no, they are light," which I suppose means that in other times heavier plows were used, and that these are *comparatively* light. If so, the world is certainly "growing wiser" in one respect, and I hope it may grow wise fast; for I am very sure that with one of Ruggles, Nourse & Mason's plows, on any ground, light or heavy, stony or feasible, a span of horses, or a yoke of oxen, will do more work, and do it better, more easily for the team and for the plowman, than a three-cattle team with one of these long, heavy plows; and the difference in the expense of team-work and feed would be equal to the purchase of a beautiful Worcester plow for every 25 days' work of plowing to be done on a farm. Some English farmers, and more Scotch, are getting their eyes open to the advantages of using lighter implements, and I have no doubt that an important change in this respect will take place within a few years. At present, they are too apt to think, that, if an implement "does its work *well*," nothing more is to be required. I am inclined to think, that, by the time a few thousands more of laborers have fled to Australia or America, they will begin to think that something more should be required, than simply that an implement should "do its work *well*"—that it should do it economically of team strength, and with some regard to the comfort of the laborer.

Very much is said by English writers on agriculture, in favor of deep plowing. Cuthbert W. Johnson has written on this subject the best probably of any man living or dead. It would seem as if his writings must carry conviction to the mind of every practical farmer and of every thinking man. If he and other English writers have not demonstrated the benefit of a thorough pulverization of the soil to a great depth, then nothing agricultural ever was or ever can be demonstrated. And yet in practice I saw very little plowing more than six inches deep, much not above four or five, and considerable but three. Owing to the more northern latitude of England, to the more frequent rains and less sun, their soils seem to be heavier than those among us, which pass under the same names. For instance, what they call a sandy soil, appears about as heavy and nearly as tenacious as soils which we call loams; and what they call loams, appear to be nearly on a par in point of tenacity with what we should call clay soils. As a general thing, their soils are less friable and less easily worked than ours. Soils, which they denominate clayey, are exceedingly refractory, almost as hard in dry weather as brick, and so tough and clingey, when wet, that it is hardly possible to break up the furrows into any thing like a fine tilth. All this may, for aught I know, operate as a reason for shallow plowing; and I will not therefore undertake to say that they are wrong in every case in plowing but three, four, five, and seldom more than six inches deep; but I am quite certain that in our climate, with regard to a great majority of our lands at least, it would be a great piece of folly to plow no deeper. Nearly all the plowing which I saw there was what we should call shallow; and if it is deep enough for them, as I think it is not, it certainly is not for us. Their plowing, however, is done with extreme neatness. I have remarked in another place that in Scotland farms are generally subdivided into large fields, oblong in shape, giving long lands for the plow. Of some portions of England the same remark would be true; but of England generally and of Ireland, so far as my observations extended, the reverse is true—farms are subdivided into entirely too small lots; too many wide-spread hedges encumber the ground; and the work for the plow is too short, occupying nearly half the day in turning round those big, lumber-legged horses, harnessed as they are, more commonly than in a team, one before the other. Think of three horses *tandem*, sometimes four even, hitched in no very compact order to a plow having a beam nearly as long as a rod-pole, and handles long enough to knock off chestnuts with! Electricity would get tired in going from one end to the other of such a team. And then think of putting "such a length" of team into a little, compact lot, nearly square, and surrounded by a hedge. If you could plow within 16 feet of the end of the lands you would do well. As for throwing the plow round, it would be impossible. The conquerer at Gaza would not be stout enough for that. But English plowmen always plow their head-lands crosswise. This accounts very well for the plowing of the whole field except the corners; and how in the name of common sense those are plowed I never could learn; for though I saw thousands of plowmen at the regular through work of the fields, and often entered the lots and went the rounds with them, chatting as we went, and observing the straightness and evenness of their work, yet as long as I was in England, nearly six months, I never saw a head-land plowed. I could see everywhere that they had been plowed, and that the work was done neatly to the very corners; but how, or when, I could not divine, unless St. Nicholas, pitying the plowman as much as he loves the children, comes with a shorter team and does up that part of the work in the night. I was the more inclined to take this view, from the fact that as often as I made inquiry, which was many times, I was always turned off with the reply, that there was not the least difficulty; whereas it appeared to me about as difficult as it would be to descend and reascend all the chimneys in christendom in one night. I can understand how the Irish girl can (don't) sweep out the corner of a room—the broom gives a little, shapes itself to the place; but how the long iron plow, used so much in England, can be got into the corner of a hedged field is among the *mysteries*, to me unrevealed. All I know is that it gets there and does the work handsomely, unless it be done in the night under the agency before surmised. English fields are everywhere plowed with wonderful neatness. The furrows are cut with almost perfect equality of width and depth. It contributes not a little to this, that their fields are old; have been under cultivation thousands of years; and were either free from stones originally, or have been cleared. It contributes to the perfection of the work also, that plowing is there a regular subdivision of farm labor, a sort of trade by itself, so that the laborer who plows, does nothing else but plow—plows nearly all the year, and thus acquires great skill in that branch of labor. And it cannot be denied that the great length of the team and plow contributes to the straightness of the work. You often see furrows, in which you cannot detect a bend, whole fields indeed without a crooked furrow in them. But it is perfectly manifest that undeviating straightness of furrows is a sort of a *whistle* for which you may pay too dear. So far as it is attained by the skill of the plowman it is well; but if it be procured by an addition of thirty-three per cent. to the necessary expense for team work, then it costs more than it is worth.

Science has pretty clearly indicated that the soil should be loosened to a great depth; that air and water should have a free circulation from fifteen to twenty inches instead of from three to five; and that roots should have no obstruction to running downwards to regions of equable temperature and moisture. What Science indicates, should, in this case, as in all others, be tested by careful experiment. I would go so far even, as to say, that nothing should be regarded as settled, till the practical farmer can put his seal to it. This matter of deep plowing *is proved* to be good policy. Farmers, here and there, all over the British Islands, have practiced it for many years—have plowed eight or nine inches deep, sub-soiled as much deeper, and reported to the world the great benefit. Other farmers have heard their story. Nearly all have learned *to talk* well on the subject. As happens in many other cases, their *practice* is not as good as their *talk* would lead you to expect. With the isolated exceptions before alluded to, their plowing is beautiful, straight, even, making a perfect *corduroy*, but not sufficiently deep.

2. *Clod-crushing*. If Samuelson's digger, so much applauded by Mr. Mechi, or any other implement calculated for tearing up the ground in small fragments, shall drive the plow from the field, as that distinguished farmer seems to expect, there may then be no necessity for a Crosskill's Clod-crusher, nor for any similar implement. But so long as the essential *principle* of plowing—that of inverting the turf in long strips over a mould-board—shall be in operation, another process will be wanted, in order to break the turf into short pieces, and at the same time to crush the pieces, and to crumble the earth away from the grass roots. All these ends I suppose to be gained by the use of the Clod-crusher. The turf is cut into short pieces; these pieces are finely crushed; the grass roots are dislodged from their hold on the soil; and the grass is put into a condition to be so separated from the soil by the harrow as to die out. This business of clod-crushing is more important in the damp climate of Great Britain than among us, because there the mere covering of grass, owing to a want of heat in the soil, is not as sure to kill it as here; nor will buried sods as readily ferment and give their nutriment to the crops.

3. *Of Harrowing*. This branch of field culture is "done up" in fine style by English farmers, almost uniformly. It is hardly possible to conceive any thing more beautiful than their fields, when the work of harrowing is completed. I observed that in France and in Belgium, harrows with wooden teeth are much used. In either of those countries it is very common to see a man working three horses, each horse attached to a harrow with something like forty or fifty wooden teeth. The horses are trained to the business perfectly. The man walks along the line between the harrowed and the unharrowed land. The first horse walks by his side, without being led, and about three feet distant. The second horse follows the off side of the first harrow; and the third horse follows the off side of the second harrow, which produces a lap of about half the width of each harrow on the ground gone over by the one proceeding. But the harrows in England, so far as I noticed, had iron teeth, were much heavier than those in France and Belgium, and required more than one horse to draw them. Many of them were made wholly of iron, and were very heavy; but they certainly have the merit of "doing their work *well*."

4. Although English farmers do not plow as deeply as I am confident is for our interest to plow, nor as deeply as their own theory seems to demand, for they are always talking in praise of deep plowing, yet they have the merit of working over the soil, so far as it has been loosened up by the plow, admirably well, of pulverizing it as finely as its character permits, of mixing its parts thoroughly together, and of distributing the manure evenly throughout the whole. Their success is no doubt attributable in part to this trait in their husbandry.

I ought perhaps to speak of a process, which, with them, often precedes that of the plow. It is what they call *scarifying*. It consists in cutting over the ground, so as to sever the grass from its roots, just below the surface; and it is done, in some cases, with the scarifier, a sort of mammoth horse-hoe, but more generally with the ordinary plow. The grass and weeds thus cut are afterwards raked into heaps, and subsequently either burned, or carried to the barn-yard for manure. The object is to cleanse fields, which, from having too seldom produced hoe-crops, have become foul. When the operation is performed with the plow, it is done by turning furrows as wide and as shoal as possible, thus cutting over the whole surface and burying the grass to the least possible depth, in order that it may first be smothered and then dried up. After a few days, the harrow is applied, which separates the grass from the soil and rolls it up into a kind of rope-like wads, in which state it is easily raked together for burning or being carted off. This leaves the ground beautifully prepared for the plow.

The reader may ask, as I did many times, without ever being fully satisfied with the answer returned, "Why not plow this grass under—bury it so deep that it will never be heard from again?" The answer was uniformly the following or something like it:—"We know not how it may be in your dryer climate, but, with us, *burying grass will not kill it.*" Indeed one of Mr. Mechi's principal reasons for preferring Samuelson's Digger to the "doomed plow," as he says the plow *is* "doomed," is, that it leaves the greatest wads on the surface, where, he says, there is a chance for them to die, while, if plowed under, they are nearly sure to live. I could not but think that our double, Michigan plow would bury even these semi-immortal grasses, so much complained of in English fields, beyond the possibility of ever coming again *alive* into the "upper light." But English farmers think otherwise; and if they are right in believing that nothing but five, or a six months' trampling in the barn-yard, will kill their grasses, it only shows one of the many characteristic differences between farming in their climate and ours.

Several French farmers, whose fields I visited, practice a sort of scarifying, but very different from that of the English, and, as they explain the matter, for a very different reason. The work is done, so far as I saw, with the common plow. It consists in cutting a very thin slice, two inches perhaps on one side and running to an edge on the other, some 10 or 12 inches wide, and turning it upon an equal unplowed width—cutting and covering, as we should say. Their object seems to be, not so much to kill the grass, for, in their sunny land, it would die fast enough if turned under, but to subject it to a partial decay before being buried more deeply, in order that it may the sooner undergo a complete decomposition, and thus give up its elements to the coming crop. This is done, from 10 to 15 days, depending a little upon what the weather may be, before the final plowing and harrowing for winter grain. The reasoning, by which they sustain this course, seemed to me rather ingenious than solid: for I believe there is very little danger, in a sunny climate, like that of France, or our own, but that any thing in the way of green crops will be decomposed soon enough after being turned under; and if so, that slattering, half-way plowing, of which I have spoken (enough to make an American farmer ache all over to see) must have more of labor than of profit in it.

Respectfully yours, J. A. Nash.

Important Suggestions about Grasses, &c.

Messrs. Editors—The farmers are very unlike the gardeners in one respect, *e. g.*, in endeavoring to secure the greatest number of species of plants for cultivation, and why is this? We see horticulturists zealously searching every land for new and rare species, gathering them from every clime, and at any expense, while the agriculturist is content to cultivate but a small number of those that are adapted to his soil and his wants.

Experience and observation show that the larger the number of species cultivated, (unless the number be *very* high,) the better they can be grown. The same field is not sown with the same crop for a long series of years, but with different ones in rotation. Change of seed is often attended with profitable results, even in merely changing the varieties of the same species. In the face of this, why are not more species cultivated on the same farm? It would be perfectly practical on the larger ones.

In this State but a very few kinds of grass seed are sown besides the common herds-grass (Phleum pratense,) for the production of hay or pasture; many others are found, but their presence is purely *accidental.* I do not allude to clover, as that is not a *grass*, strictly speaking.

Besides many rare kinds, more than sixty species of grass are spoken of by botanists, as "common" in the New England, Middle and Western States, and a large number of these are found in pasture lands self-propagated, as the term is. Their seeds are not sown, nor is care taken to cultivate them, although many are considered valuable for pasturage, and are well known to most farmers.

I was pleased and interested in seeing a collection of grass seeds in the English Department in the Crystal Palace, New-York, a short time since. There were represented some twenty-five species of grass seeds, several of which are unknown to our American farmers, which might possibly prove valuable here, to cultivate alone, or mixed with those we now have. Among these were five species of spear grass, (Poa.) Over twenty species of this genus are found in our pastures, imparting to some great value. Still they are left to propagate themselves; there is no care whatever taken to preserve them. Among seven species of fescue grass, (Festuca,) four were species unknown here, and if introduced might prove as valuable as some of those we now have in our sheep pastures.

By the same exhibitor were also shown seeds of four species of clover, (Trifolium.) We cultivate but one, the red, although white and yellow are by no means uncommon or unimportant. Also many species and varieties of grain, some of which we are unacquainted with. In the collection were nearly fifty varieties of peas, nearly forty of beans, and over thirty of turneps, &c.

In this connection I saw last summer, a new species of clover from California, said to be indigenous to that country, that bids fair to be of value in our clover districts. Time, however, must test that, for I am well aware that many very promising species soon degenerate in our climate and soils.

I think this a subject worthy of more attention than it has hitherto received from the mass of our farmers, and hence call attention to it, as a field from which we may yet reap rich harvests. Your ob't serv't, Wm. H. Brewer. *Ovid, N. Y., Jan.*, 1854.

P. S. I see in your last number, an inquiry relating to the propriety of laying blocks of wood in cellar walls, (p. 56.) and your answer is, that such blocks will last a very long time if excluded from dampness. Now this is a condition not to be attained in cellar walls, for mortar, whether of water lime, or of common lime, is permeable to moisture and air, and such blocks soon decay unless they have undergone some chemical preparation to prevent this; if placed in walls above ground they might last longer. W. H. B.

Draining Ponds.

I have rented a farm for five years; nearly all the tillable land is creek bottom, sandy, and usually overflowed every year. But the up-land is clay with a slight mixture of sand; the subsoil, quicksand, about six feet from the surface. In this there are two ponds of about an acre each. One of them I can drain with a blind ditch. Will it pay me to ditch it? The other pond is so situated that I cannot drain it by ditching. I have thought of digging two or three wells down to the quicksand, and curbing it in with timber. Would that be likely to secure the object? T. Lowry. *Rockville, Indiana.*

Our correspondent has not furnished sufficient data for an answer; so we must answer conditionally. If the pond, when drained, will be likely to furnish a fine bed of rich arable soil, five years' rent of which will probably exceed in value the cost of the ditch, then of course it will pay draining, but not otherwise. This we cannot determine until we know the depth, length, and labor of cutting the ditch, and the yearly value of good land in that region.

If the quicksand is so porous and dry at *all* seasons of the year, that water will always soak away rapidly in it, then the cutting a well through the basin of the other pond into this bed of quicksand, will effect drainage. Otherwise, it will not.

Preparation of Bones for Use.

Messrs. Editors—The best and cheapest method of preparing bones for manure, is first, to boil them in strong ley, a few hours, to extract from them the animal matter, or what would be more convenient perhaps, break them as fine as convenient, and put them into a tub of ley to remain there during pleasure, until the animal matter is all extracted and incorporated with the ley.—The mineral part of the bones will now be found very friable and easily pulverized. They should be rinsed clean, pulverized and put into another tub or trough.—Apply to them some diluted sulphuric acid, in the proportion of one of acid to four or five of water. Stir them frequently, and in a short time, they will be entirely decomposed and fitted for use. These two masses, being equally rich in the elements of fertility, the one of ammonia and the other of phosphorus, are equally valuable as fertilizers, and adapted to any and every variety of soil that may be deficient in these elements, and equally necessary for the healthful maturity of every growing plant, whether of grain, grasses, fruits or roots. I would now advise a mixture of these two masses with the general compost, to secure a general diffusion of them upon the different fields to be manured. My reason for the general diffusion of these masses, upon the different fields is, first, every plant needs them. Secondly, the farmer's resources, in this line, will be mainly within himself. This will be true of all those that live at a distance from villages and cities. Their resources must therefore be small. Thirdly, the elements of the bone, both the animal and mineral, were taken from the different fields, and should, therefore, be returned to the same fields. To keep up the fertility of each field, it is necessary to return to it annually, the same elements that are so taken away. The farmer may secure a larger crop of any kind, on any field, by robbing other fields of the same elements of fertility to enrich that one. But such a policy would not only be bad, but ruinous if pursued. Yours most respectfully. J. L. Edgerton. *Georgia, Vt., Jan.* 14, 1854.

Cow-Milkers—Bommer's Manure.

Please give a description of the Patent Cow-Milker advertised in some of the back volumes of the Cultivator; also your opinion of Bommer's patent for making Manure and price of receipt. C. *West Greenville, Pa.*

We suppose our correspondent refers to the tubes made for entering the orifice of the udder, and kept in their place by gutta-percha cases round the teats. The tube keeps the udder open, and the milk flows out. This, in substance, is an old method, as we can well remember in childhood the practice of mischievous boys in thrusting straws or the barrels of a small quill up the udder, to save them the labor of milking,—a few repetitions always causing an opening so permanent, that large quantities of milk escape and waste during the intervals between milkings. These cow-milkers are therefore worse than useless.

Bommer's patent manure is made by erecting a square pile of straw, stalks, leaves, and other dry vegetable matter, at the side of a vat or reservoir. Liquid manure from the vat is pumped repeatedly on the pile, causing its fermentation. The pile is built on rails and brush, so as to drain freely, and admit the air from below. All surplus drainage passes off into the vat. The liquid manure is made by mixing night soil, and other rich materials with water, adding gypsum, with some lime, ashes, salt, &c., and stable washings. Bommer published a useful pamphlet on making manure, not now in market. The patent is generally thought not to be valid.

Fattening Animals with Cod-liver Oil.

The London Lancet gives an account of a series of experiments made by Dr. James Pollock upon fattening animals with cod oil. They were conducted upon a large scale, and he found that pigs taking the oil ate less meal, weighed the heaviest, and brought most money per stone in the London market, the fat being firm and white. He fed from two ounces to a quarter of a pint daily, with good results; but when larger quantities were used the fat became yellow and the flesh tasted fishy. He states that when sheep were fed one ounce a day the fat was beautifully white, and the flesh light and easy of digestion, and gave general satisfaction to the consumers. The experiments with bullocks had been equally satisfactory. He feeds the bullocks oil mixed up with meal and chaff; the pigs have it mixed with dry meal; the sheep have split beans soaked in oil. The commonest oil costs in England from 2s. 8d. to 3s per gallon, and the saving of expense is very considerable. Dr. Pollock also says that the relief to a broken-winded horse from the administration of cod oil, is very soon perceptible.

Whether these experiments are of any practical value to farmers in this country or not, they are interesting inasmuch as they show the importance of studying the application and physiological action of different food, and oils, on the animal system.

Plans laid in Winter.

There are many of the smaller, but almost indispensable conveniencies of a farm, that are scarcely ever all present in one establishment; many, indeed, being destitute of most of them, and the best farms being perhaps deficient in a few. The farmer has leisure in winter to look over these deficiencies, and may often either supply them at this season, or make partial provision for them, or lay his plans for securing them in summer.

For example—Every farm should have gates for entering the fields instead of bars. Some farmers are sufficiently ingenious to make these with their own hands, in winter.

Every farm should have a good road or lane from the barn-yard to every field, so that loads of manure or grain may not require drawing across a meadow or corn-field, nor cattle need driving to pasture through a wheat-field.

The fences should be so good that cattle may never be tempted nor learned to jump; that crops may not be trodden down by intruders, nor valuable animals foundered; and that the urgent time of the farmer in harvest may not be consumed in driving out depredators and in patching up the imperfect boundary. Difficulties between neighbors from intrusive animals will perhaps be recollected by some,—where a good fence has proved a *defence*—a bad one an *offense*.

A capacious wood-house, for the thorough seasoning of at least one year's fuel, is indispensable. Two, for one year each, are better, one to be filling while the other is emptying. Or if only one is built, a door should be placed at each end, so that the dry may be taken out at one door, while the green is carried in at the other.

Capacious rain-water cisterns should be provided for all the principal buildings, so that there may be room for at least five hogsheads of water for every ten feet square (100 sq. feet) of roof, in order that no rain-water may be lost, and which is at least five times as capacious as cisterns are commonly made. Such would save much trouble in times of severe drouth.

Every farm, besides a barn and dwelling, should be furnished with a tool-house, wagon-house, work-shop, corn-house, granary, smoke-house, manure shed, cattle sheds, poultry house, a good, neatly made and neatly kept piggery, a neat vegetable cellar, a fruit cellar, a straw-barn, a business office, a clothes-drying alley, a large root cellar, and lastly, but by no means the least in importance, neat, well-painted, (both internally and externally,) and nicely kept *privies*, so arranged as to be kept inodorous by frequent applications of ashes, lime-dust, dried peat, saw-dust or charcoal, kept in a flat, water-tight, gas-tarred box, placed on runners, so as to be drawn off frequently by a horse, and emptied.

Besides the foregoing, the good kitchen-garden must not be forgotten, to be well supplied with the smaller fruits, currants, strawberries, raspberries, gooseberries, and dwarf pears, as well as with the finest early, medium, late and winter vegetables; nor the neat door-yard lawn, judiciously and tastefully planted with ornamental trees and shrubs, and occupying not merely the front of the dwelling, but extending on each side, so that the occupant may not be frightened if the casual visitor chances to cast a glance on any other side of the house than the front. The well planted and well cultivated orchard, for supplying fresh fruit the year round to the table and kitchen, as well as for market, will suggest itself to every intelligent farmer at the present remarkable fruit-planting and fruit-eating era.

Application of Manure.

Messrs. Editors—It is somewhat remarkable that there should exist so great a diversity of opinion among farmers upon so important a subject as that of applying manure, *i. e.* whether in a green state or well decomposed compost—whether on the top of the ground, or buried underneath the surface by the action of the plow. Why may not this subject be in some way *definitely settled* by the action of some of our numerous agricultural societies, so that we may not be left to the Yankee prerogative of *guessing*, as to the most profitable course. My own course has been for years invariably to put my fine manure on or near the surface; and the long entirely out of sight with the plow.

In regard to the long manure so used, we do not of course get very much benefit from it until the second season; but its tendency is, I think, to leave the ground in a light and friable state, and in good condition to receive a crop of clover.

Do, Messrs. Editors, be kind enough to give us your opinion on this matter; and I would also be pleased to have your readers who have had experience in this matter, give us the result. Wm. J. Pettee. *Lakeville, Conn., Jan.* 16, 1854.

For our views on this subject, see the 51st No. of the Country Gentleman, or the Cultivator for January.

Kentucky Blue Grass

Mount Ida, Ky., January 10th, 1854.

Messrs. Editors—In the last number of the Country Gentleman, I notice that a subscriber wishes to know if Kentucky blue grass would do well on lands that are permitted to remain five or six years in pasture, and then plowed two years, and then laid down again to pasture. I am a Kentucky farmer of but very little experience, yet I know this would not answer at all. It takes blue grass three or four years to become well set, and then it would scarcely do to graze it down, especially in wet weather or in loose wet soil, as it is too easily pulled up until it is well-rooted. In six years it would make the best pasture, and just then the farmer would wish to cultivate his land two years, and would lose his labor and have the same to go through in order to reseed his land. Our farmers seldom sow blue grass on open land, unless they wish their fields to lay in grass ten or twelve years, their best blue grass being in woods pasture. We find nothing equal to Timothy or Red Clover, mixt half and half; it takes less time to set, and is of more advantage to the ground than any other grass crop. Where can I get the genuine Cuba tobacco seed? A Subscriber.

Potato Culture—Soils—Bones.

Mr. P. PRATT, of Deep River, (Ct.) says, "After all that has been said and written about the potato rot, I think I know well the cause and the preventive. Potatoes have rotted for ages, when covered with water before ripe, and lately, when enveloped in mud, which fills them with water, and prevents the tuber discharging its impurities. But the first great cause is a hereditary disease, arising from bad cultivation and a want of the right material in the soil. The potato has been robbed of what is essential to its composition, in the soil, by the cultivation of wheat, corn, oats, buckwheat, &c.; and stable manure will not supply what is needed. In most cases, new land from the forest is perfect soil for the various crops; and, as far as I can learn, potatoes are invariably sound on new land, especially if burned over. Wheat grew abundantly in this region when first cleared up; but the richest land will not grow it now. The peach does poorly on long cultivated land in this region, but grows finely, for 30 years, on land not cultivated before. We had the finest field strawberries, in my boyhood, 60 years ago, but they are all minus now.

"About 20 years since, I manured a piece of ground with ivory dust from my comb-factory, and with yard manure, and with bone dust fermented with ashes. It has since been divided into two large gardens. It has had potatoes on it ever since, Mercers and others, and they have been sound and good. I do not suppose that ivory, or bone dust, is the only thing that will answer; but I contend that something is necessary to restore what is taken from a perfect soil.

"As to whether I am right respecting the potato—if you find the analyses of a potato grown on new, wood soil, of one grown on old soil where they have rotted, and the soil of each, it will settle the question.

"Your reply by mail, or through the Country Gentleman, will be thankfully received; and I am willing to reciprocate the favor; or if expense is necessary, in analyzing, I am willing to satisfy you for the trouble."

We have copied so much of P. P.'s letter as relates to the potato; and with regard to it we remark:

1. If P. P. knows well the "cause and the preventive," he should diffuse his knowledge; for it is of vast importance to the whole civilized world.

2. We like P. P.'s reasoning. We think it goes far towards establishing his main positions, first, that the cause is "a hereditary disease," and, second, that the preventive will be found to be the restoring to the soil what has been taken from a perfect soil.

3. It is not convenient for us to make at this season of the year, nor to procure the analysis which P. P. desires. They should be made in autumn, soon after the potato crop is harvested; and we now suggest to analytical chemists, that if they will analyze a sample from the sound crop of a virgin field, another sample from a crop grown on an old field where many have rotted, and a sample of each of the soils, important and valuable conclusions may be reached.

4. It is a question whether P. P.'s manuring with ivory dust, yard manure, and bone dust fermented with ashes, has had much to do with the soundness of his crop for the last twenty years. It may have had. The ivory dust would be likely to operate slowly, and consequently somewhat permanently; and the bone dust fermented with ashes, and applied to the soil, without the addition of sulphuric acid, (by which it would have been changed to quickly acting super-phosphate of lime,) would also be likely to act slowly and permanently. Possibly the effects of that dressing may have lasted twenty years, though we could hardly believe it. Bones coarsely broken and spread upon pasture have been known to manifest the most marked effects for a quarter of a century; but when bones are heated with ashes, they fall into an exceedingly fine, minute division, in which the effect would be likely to be quicker than if they were only broken in a mill, but not as quick as if they were changed by sulphuric acid from a phosphate to a super-phosphate of lime, the super-phosphate being quickly, and the phosphate slowly, soluble in water.

5. We will add, that we know a gentleman, who for eight years has manured potatoes with bones fermented in ashes, has had good crops uniformly, and not one of them has rotted; but unfortunately for the conclusion to which he would have been glad to come, he has planted other potatoes every one of these eight years, with all sorts of manure, and some without any manure, and neither have one of these rotted, with the exception of a very few, where no manure was put.

The bones, in the case just alluded to, were treated thus: In a large family, consuming much butchers' meat, the bones were thrown into a hogshead from day to day; ashes, as taken from the fires daily, were thrown upon them; enough water to keep the whole moist and to prevent the gases escaping was added from time to time, the falling rains generally being sufficient, as the hogshead was placed in the open air, away from all buildings. When one hogshead was full, another was taken, (old sugar hogsheads.) The bones, treated in this way, retained their form and size, but became soft, so as to be easily cut through with a shovel, and rubbed down with the back of the shovel into powder with some extra ashes or dry earth. The oily matter of the bones, together with the potash of the ashes, and the water thrown on, becomes a soponaceous mass, and the phosphate of lime in the harder parts of the bones is diffused through the soapy mass in a state of exceedingly fine division. Bones thus fermented in ashes are exceedingly valuable for potatoes and for Indian corn, and probably for nearly all crops. There is reason, from actual trial, to believe that the effect on the land is permanent, lasting at least several years. N.

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ANOTHER REPORT FROM "CHERRY."—There was made from the milk of the cow, Cherry, now four years old, owned by Miss Mary Brice, New Scotland, in this county, from Nov. 19 to Dec. 19, 1853, 46 lbs. 4 oz. of butter, being over one and a half pounds per day. She was in fresh milk, having recently dropped her calf.

Water Pipes.

"I am desirous of ascertaining at what expense I can best bring water from a spring to my house, barn, &c., a distance of about 200 rods: Can pipe of water lime be laid for the purpose, so as to be permanent, and if so at what depth, and at what expense per rod? Where can it be obtained? And what is the most economical mode of bringing water? Yours, S. D. T. *Fergusonsville, Jan. 9.*"

Water-pipes have been made of water-lime mortar laid in the bottom of a ditch, round a cylindrical rod, which is gradually and carefully withdrawn as the mortar hardens, and as the work progresses. This, when well hardened, is eminently durable, and we do not see why it may not last forever. The only objections are, when withdrawing the rod, there is danger ot causing slight cracks in the mortar; and, like all other underground pipes, sediment may be deposited at the lowest places, which after a time will choke the tube.

To prevent the deposit of sediment, the slope should if possible be uniform, and if the descent is considerable, this care will prevent all danger. Great care should be taken, also, that the water runs clear into the upper and of the tube, which of itself will nearly remove all liability to this difficulty, especially if it is made to filter through a partition of coarse sand.

To prevent the cracks in the water-cement, an improvement has been lately introduced, which scarcely if any increases the cost, and renders the construction of the channel easy, rapid, and certain. It consists simply in bedding *tubular tile*, such as is used for draining, in a bed of water-lime mortar, laid in the bottom of the ditch. Two-inch tile is sold for about 15 cents per rod at the manufactory. A sufficient quantity for the 200 rods would weigh nearly three tons—from which our correspondent may estimate the cost of conveyance by railway and team from the nearest tile-factory. Digging the ditch will cost more or less, according to the nature of the soil, and the depth required to descend beyond all possible action of the frost, but may be estimated at an average of 20 cents per rod.

The water-lime may be had at any considerable market town; and if sand is convenient, the cost of the mortar will not usually exceed 20 cents more per rod, enough to encase the pipe an inch in thickness. From fifty to seventy-five cents a rod would doubtless cover all expenses—varying with soil, climate, cost of tile, cement, and sand. This is scarcely a third or a quarter of the cost of a lead-pipe channel, sufficiently large for safety, and which would have the additional objection of danger from a solution of the poisonous material.

The bottom of the ditch should be cut with a narrow ditching-spade so as not to exceed four or five inches wide, as this would contribute to both convenience and economy, in depositing the mortar around the tube. It should be understood that the tile should be completely imbedded in the cement; and if from crossing low places, any degree of pressure from a head of water should occur, greater thickness in its application should be used; for the tile is not only in some measure porous in its texture but is not strong enough to resist much internal force. Where the head is great, as for example in crossing a deep vally, strong lead pipe may become indispensible.

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Reels for Reapers.

Having bought a reaping machine last season without a reel, and finding it desirable to have one, and no one in this vicinity having any koowledge of them, I would inquire through the Cultivator, how fast the reel should revolve, *i. e.*, what should be the relative velocity between the circumference of the reel and that of the driving wheel.

If it is not too much trouble I should like to see in the Cultivator a description of the new reel with sliding arms, what are its advantages, &c. I am unacquainted with the practical working of the reaper, but believe it is common for rakers when raking the grain from the machine to make it (*i. e.* the grain,) describe a quarter circle, so that the bundle lays across the swath instead of lengthwise. Why is this necessary? P. P. P.

The backward velocity of the outside of the reel, that is, of the horizontal bars or blades which strike the standing grain, should be nearly the same, but a little greater than the velocity of the whole machine forwards. It will thus hold the grain to its place while the blades are shearing it off, and at the same time give it a stroke backwards, so as to throw it, when cut, upon the platform. The *precise* difference in these two velocities, for the best practical effect, we are unable to give, but suppose it should be about ¼th increase.

The advantages of the new reel with sliding arms carrying the rake, as we understand it, are in keeping the rake in close contact with the platform while sweeping the newly cut grain from it—as a *circular* motion of the rake would not clean the flat platform.

The revolving of the rake upon the reel, is for the purpose merely of depositing the heaps more neatly, and is especially necessary when the heaps are to be thrown ff at the side instead of directly behind.

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Posts heaving by Frost.

I have observed in clayey soils that are so heavy and tenacious as to prevent the water from draining off, the frost has more power on fence posts, by drawing them out of the ground. Is there no remedy against the frost, by placing some substance round the post, such as coarse sand, gravel, coal, ashes, or tanner's bark? F. McKAY. *Nova Scotia.*

Placing gravel or coarse sand around the post would lessen or obviate the evil, if it were not that the clay about these substances holds water like a tub, and keeps them filled, so that in freezing the difficulty is not removed. If an underdrain were cut directly under the fence, or close at its side, the moisture from this sand and gravel-packing would of course be immediately carried off, and the remedy prove efficient. Tan would affect ready drainage into the ditch, but would not hold a post firmly. Such a drain would pay for itself by its improvement of the adjacent land, besides its beneficial use to the fence. Where this remedy cannot be properly applied, and indeed in all cases whatever, a most effectual help in preventing the upheaval of posts, is to bore a two-inch auger-hole near the bottom, and into this drive a pin of durable wood, so that it may project several inches each way, at right angles to the post, and when the earth is rammed about it, will hold the post firmly in the ground and prevent its rising by frost.

Gas-Tar.

I wish to be informed through the Country Gentleman what coal-tar is—the article used on the roofs of buildings. Would this substance be of any use applied to wooden fence posts to preserve the part set in the ground from rotting? A SUBSCRIBER. *Windsor county, Vt.*

Gas or Coal-Tar is the refuse tar from gas-works. Two or three coats, well dried, act as a powerful preservative of all wooden substances to which it is applied; and from the experiments we have made, with wooden surfaces constantly exposed to moisture, we have no doubt it would be valuable on fence posts—certainly more so than *charring*, which after all, admits moisture through the charcoal—this would not admit it. Gas-tar, under soil, is said to be gradually decomposed; but if well dried previously, the process would certainly be very slow.

Spring Wheat.

MESSRS. EDITORS—Will you have the kindness to answer me the following questions through your valuable paper, the Country Gentleman? What kind of soil is required to raise spring wheat?(*a*) Will limestone soil answer? How many bushels are required to be sown upon the acre, and at what time should it be sown?(*b*) And how many bushels are generally raised to the acre, and what is the general price for it in the New-York market,(*c*) it not being raised in this part of the country. By answering the above questions you will confer a favor upon A NEW SUBSCRIBER. *Easton, Pa.*

(*a*) The same soil that will bring good winter wheat or good barley—what is usually termed "limestone," soil will doubtless answer well.

(*b*) About a bushel and a half seed should be sown per acre, as early in spring as it is possible to get the soil in good condition.

(*c*) Twenty bushels per acre is a fair crop—the price is about one "York shilling" less on the bushel than good winter wheat.

Churning by Steam Power.

MESSRS. EDITORS—I wish to obtain information on the application of steam power to churning. I have usually churned by means of water power, but that frequently fails at the season of the year I most need it. I wish to know whether steam power is in use in any of the large dairies, and what the opinion is in relation to its safety and utility as compared with other modes. And also what the cost will be of an engine with the necessary fixtures of sufficient power to churn the milk of forty cows. Also where such engine can be obtained. A NEW SUBSCRIBER. *Genegantslet, N. Y., Jan.* 18.

Engines intended for farming purposes have been made for sale by HOARD & Co., of Watertown, N. Y. The price of a portable engine of half a horse power, is $75; one horse power, $150, and at a similar rate for other sizes. We have not known their use for dairies merely; in ordinary cases, a single horse would be found most convenient; where an engine sufficient for thrashing, wood-sawing, &c., is used, it would be so large as to prove a waste perhaps, of power for churning.

We do not look for the immediate introduction of steam power on farms in this country. In England, where horses are costly, and where coal is abundant, engines for thrashing, winnowing, cutting straw and hay, grinding grain, &c., &c., have been introduced to some extent on large farms; but most of the attempts here have failed. The proposition to assist their introduction by adding the *plow* to the objects of their force, will certainly prove a failure; for if, as is now the case, it is found here most economical, without one exception in ten thousand, to apply *horse power* to thrashing, and other *stationary* farm machinery, the difference in favor of the latter must be still greater, when the constant locomotion of a heavy engine is required over soft ground, wasting a large portion of its power, besides its effective force in working.

Farming in Bristol, Vt.

MESSRS. EDITORS—With your permission, I propose to give the readers of the Country Gentleman, (a paper which ought to be in the hands of every one who tills the soil,) a few ideas of farming in this vicinity. We can cultivate almost any crop to advantage, provided we keep the soil in good heart, without being at too great an outlay to entirely destroy the profits. Our staple crop is Indian corn. We generally plow the land in the spring, to the depth of five or six inches, turning under a good coat of manure. Sometimes the manure is spread on after the ground is plowed, and harrowed in. Which is the best method, I am unable to say. There are various opinions about it; but the most of our farmers adopt the former method.

There should be several rules laid down before undertaking to cultivate this crop. The first should be a good high fence around it, to protect it from unruly cattle; secondly, to have the land in good condition, and thirdly, to have a good variety of seed. With these conditions, if well cultivated, we may expect good crops.

Ashes, lime and plaster are used as fertilizers; generally put on the hill.

To succeed this crop, oats are generally sown, and are profitable to the farmer if properly cultivated. If we should manure the land for this crop as we do for other grain, we should not hear as much about the oat crop being so exhausting to the land. After this crop is taken, winter grain is sown with grass seed. Then the land is laid down, either to pasture or meadow.

There is one part of good husbandry that we do not practice to any extent, that would be a most important item in farm economy, where land is as high as it is in this section of country. That is, soiling cattle and horses. By introducing the practice of soiling, a considerable saving of land will be effected. One acre of cut grass, or corn, sown with about three bushels per acre, will be equal to three or four of pasture. There is also a great saving in the quantity of food consumed as well as a greater variety of plants eaten.

When animals are suffered to go upon the field, many plants are necessarily trodden under foot and bruised, or partly buried in the earth. In this state they are greatly disrelished by cattle, and are suffered to run to waste. This circumstance never could occur if the practice of cutting were adopted. Cattle will eat with great avidity many plants, if cut and given to them in the yard, which they never would touch while growing in the field. It is well known that when animals are exposed to the sun in the open air, they are not only greatly incommoded on many occasions by the heat, but are also annoyed by swarms of flies, gnats and hornets, which obviously tends to impede their thriving. The proportionate increase of manure obtained by this system evinces its superiority over pasturing; and manure is the life and soul of good farming. This manure no doubt is as good as that which is produced in winter. Cows fed in this way will give a greater quantity of milk, and increase in weight faster than when they run in the field. They are less subject to injuries, and do not suffer by the heat. JOHN MCKEE., *Bristol, Vt.*

Theories and Experience—Root Culture.

MESSRS. EDITORS—I have read carefully the communication of G. E. H. in a late number of the Country Gentleman, entitled "Theories and Experience." A subscriber to your weekly paper, and a constant reader of it, I acknowledge that I have failed to find any evidence in its columns of a restricted policy, and should be very sorry to see it committed to any position adverse to either theoretical or experimental truth. A practical farmer, I feel daily the want of more light. From whatever quarter it may come, I would receive it gratefully.

But I cannot do without theories. Every experiment is a step into the unknown, and must be based on some assumption. I have had for every real acre of my farm, a corresponding imaginary or theoretical one for years. The theoretical condition of these acres has never been just their *actual* condition, nor do I believe that it ever will be; and yet I think that year after year the newer theory is a little nearer the truth. Again, these notions are a little different from those held by (so far as I know,) anybody else. Now after frankly admitting that these conceits are undoubtedly erroneous in many particulars, and that I am alone in holding them to their full extent, it may seem strange that anything should be urged in extenuation; but

1. All the world has had these "baseless fabrics." Those truths which are now at the foundation of Natural Science, were once "hatched in the heated brains of philosophers." Sir Isaac Newton's great labors were to prove a favorite theory—a fortunate guess

2. No two men have just the same notions—hence. though I am alone with my crotchets, I am not singular.

3. I am fully persuaded that I could do but little without them, though they be like the Scotchman's head, which he lost in the times of the Rebellion—"poor enough to be sure, but then poor fellow, all the head he had."

If then these theories are necessary, continually changing though they be—if, in the endless variety of time and change, which happen to all men, we are often called upon to act in unprecedented circumstances, I need scarcely conclude that he whose theories are nearest the truth will be most successful, nor urge that we should form them with most scrupulous care.

But what is theory essentially? Says G. E. H., "The baseless fabric of a vision." True, and yet with the growing dawn wreathing itself into successive shapes, until with the perfect light it has transformed itself into the adamantine temple of truth. An eminent man of the present time has compared them to 14 glass windows. Some things look distorted through most of them, and yet they are certainly a great convenience.

But if theories were of no greater use, they are of great advantage for the classification of facts—a string on which the pearls of experience may be strung, each in its proper place, or an index to a man's mental possessions.

Holding these sentiments, the value which I venture to ascribe to chemistry as the foundation of true agricultural science, may be readily seen. There are undoubtedly errors in its premises, (and what science in its infancy had none?) many of our deductions are probably imperfectly drawn. There are pompous pretenders who wear its livery and claim for themselves and their doctrines infallibility. And yet I believe that agricultural truth must yet find, as mineral truth has found, and as medical truth is finding, a home in the formulas of chemistry.

Organic chemistry claims to be founded on the Baconian theory, which G. E. H. so justly eulogises, and is certainly in eminent contra-distinction to the "instructive principles of our farmers," in very many cases. It claims that the term "vital principle," like its great ante-type phlogiston, enshrouds a multitude of facts that should be arranged and classified, like any other natural truths, and that the Baconian laws must be inexorably carried even into the economy of living things.

I am aware that it is not the province of the Country Gentleman to deal in hypotheses—that its mission is to promulgate established truths, and yet feel assured from its character, and the history of its predecessor, that as fast as new truth becomes worthy of incorporation with the old, it will not fail to furnish it to its readers.

So much for theory, and now a practical word about root crops. I sowed my turneps and carrots last year two feet apart in drills in the field—hoed them twice, and then plowed them with a light wood work, made like an old fashioned bull plow, with a block of wood to run in the furrow. The wood work was made to run just to the *pitch* of the large cast plow. A wrought iron point, long and sharp, and cutting ten inches width of furrow, did the work of the hoe subsequently to the two hoeings, letting the pulverized dirt fall *behind* without covering the off side row. This plow runs closer to the row than the cultivator—runs steadier, and may be worked to good advantage in twenty inch spaces.

I worked my corn with the same plow, as it leaves the ground nearly even in surface.

I can't help adding that " theory" tells me that just as good a plow might be made with the old fashioned wood work with one handle, carefully made to the pitch of a common plow, and a new cast point fitted to the block and bolted on through the two bolt holes in the point W. *Fergursonsville, N. Y., Jan.* 9, 1854.

De Burgh's Superphosphate of Lime.

Messrs. Editors—We notice in the Country Gengentleman the results of Mr. Butterfield's experiments with superphosphate of lime sold by us. We enclose a letter from the head farmer of F. Morris, Esq., of Throg's Neck, showing very different results. We have heard some complaints respecting some parcels of De Burgh's superphosphate sent out last year, though not so many as we have heard about the same article made by others. We have examined into the cause of the failure, and have found that it arose in every instance from the too great haste in which the article was manufactured, owing to a desire to supply the great demand, and the want of the necessary accommodations. Mr. De B. assures us that these defects are now remedied. Res. yours, Longett & Griffing. *New-York, Jan.* 28, 1854.

C. B. De Burgh, Esq.—Having, during the last season, put your superphosphate of lime to full test, both in horticulture and agriculture, I beg to assure you it is with feelings of the greatest pleasure I now write of the results. I have tried your article in all the departments of common vegetables, and have met with the most satifactory results, both as to the largeness of growth and general quality ; I have also tested it in the departments of general agriculture, and have met with equal success. In one field of corn, I made experiments with six different varieties of manures, and found throughout the season that where I applied your superphosphate of lime the corn was much stronger in growth and superior in color, and when husked, the yield to be far the largest.

We had upwards of six acres of beets and carrots. The land had been plowed and the manure for the beets applied in drills, seven drills side by side. I applied seven different descriptions of manure, viz., barnyard manure, night-soil, wood ashes, decayed vegetable matter, bone dust, and Peruvian guano. I found the yield at least ten per cent. in favor of your superphosphate of lime. I tried guano and your article only side by side on the carrots. I put it on broadcast, and met with the same results as with the beets—much in favor of the superphosphate.

I consider that your superphosphate of lime is the cheapest and the most beneficial manure that can be applied to the land. Next spring I intend to apply to you for a larger supply of your valuable preparation.
James McMillan.

Notes on Oregon.

A subscriber at St. Helens, Oregon Territory, writes us as follows :

"I emigrated to Oregon in 1847. I find the climate quite different from that of the western states. The frost is never severe enough in the spring to kill apples or peaches, and in the autumn never kills potato vines till about the middle of November. Potatoes planted by the middle of July will get ripe before cold weather sets in. We have the coldest weather about the middle of December—the ice sometimes three inches thick. The weather becomes mild after the first of January, and vegetation commences the last of Jan. or in February, and by the first of April the grass is usually a foot high. I have harvested more and heavier wheat to the acre here than in the western states. It is ready to harvest by 8th of July, when the second crop commences growing up at the roots without plowing or sowing, and the next season produces full half a crop. Oats sown in October, are ripe in June, when a second crop starts up, which is ready to harvest about the first of November. We can raise two crops spring wheat, barley, peas, potatoes, &c., yearly. We come near having seed-time and harvest all the year round—in fact wheat has been sown in every month of the year, and produced good crops. The English grasses do well here, generally growing five feet high, and afford good pasture all the winter except about two weeks in December, when we frequently have snow to the depth of a foot or two. The wild grass is very fine and makes first-rate hay."

Inquiry.

Messrs. Editors—Will you or some of your numerous readers, tell me a cure for a difficulty for which I do not know a proper name, which is on the side of the neck of a young stag which has never been yoked. It is about midway between the butt of the ear and large joint in the shoulder, and looks about as large as a goose egg, and has a pulsation which may be seen a rod or more. On applying the hand, the feeling is as of a lengthened bag filled with liquid, and the pulsation has a gurgling motion. Information respecting the above will oblige A Steuben Subscriber.

Mixing Soils.

Observing how both vegetables and trees thrived in red clay, which had been turned up by deep plowing, I tried the experiment last spring of laying a coating of red clay over rich garden soil, which appeared exhausted, by long culture, of some of the ingredients necessary to nourish vegetables, although liberally supplied from time to time with manure. As far as I can yet discover, it seems to have had the desired effect in renovating the soil. The vegetables sowed on the clay did better than for several years preceding, but I will be able to judge more satisfactorily the ensuing year I thought that by putting the red clay around the raspberry, it would not be necessary to change its location. Mine have been for ten or fifteen years in the same place and have not thriven for some years, although well manured ; I cannot yet judge of the application of the red clay in this respect. J. H. *Carlisle, Pa.*

Annual Meeting of the N. Y. State Ag. Society.

The Society met in the Assembly Chamber at 12 o'clock, M., Wednesday, Feb. 8, and was called to order by the President, **Lewis G. Morris**, Esq., of Fordham, who made a few introductory remarks to the effect that gentlemen of the Society should bear in mind the pre-eminent position which the Agricultural Society of the State of New-York held among similar organizations in this country and in foreign countries, and take care that their deliberations be characterized by such calmness and judgment as comport with the importance and dignity of the interests which the Society represent.

On behalf of the Executive Committee, **B. P. Johnson**, Secretary, read a lengthy report, reviewing the action and results of the Society for the past year. The report speaks of the present prosperous condition of agriculture in the State; of the rise in the price of lands, which have advanced fifty per cent. in ten years; of the high price of all farm products; of the extent to which the practice of draining is carried; and of the manifest general improvement in farm management and economy, in the promotion of which the Society has been instrumental. It has ever been the purpose of the Society to foster improvement in every safe and judicious method, and among its objects has been the encouragement of agricultural education. This subject was receiving much attention at the hands of one of the members of the Executive Board, the Hon. **John Delafield**, but his plans have failed of their maturity through his sudden decease. The report alludes to his death in very feeling terms, and embodies the resolutions adopted by the Executive Board. The document goes on to recommend increased efforts to add to the funds and usefulness of the Society, and advises the making of experiments with different crops and manures as rapidly as men can be found to carry them on with sufficient accuracy to lead to any beneficial results.

The following is the Treasurer's report:

B. B. Kirtland, in account with Society,		*Dr.*
To Life Members, annual meeting,	$60 00	
members, do do	178 00	
Tickets sold winter fair,	164 39	
		$402 39
Interest on monies loaned,		420 00
From State Treasury,		700 00
Bond and Mortgage,		2,058 33
Temporary loans,		1,083 00
Bond and mortgage,		2,026 05
Life members at Saratoga,	$110	
Members,	3,145	
Tickets of admission,	2,740	
		5,995 00
Total,		$12.684 77
By Premiums paid annual meeting,	$686 00	*Cr.*
Premiums due at Utica and Rochester Fairs,	613 16	
Prem's paid Saratoga Fair,	3,465 38	
		$4,764 54
Expenses winter meeting,		250 50
Expenses at Saratoga,		2,028 68
Incidental and miscellaneous expenses,		173 92
Printing and advertising,		338 07
Expenses museum,		225 73
Postages,		149 02
Library,		75 79
Salaries and traveling,		2,352 59
Survey of Essex county,		421 00
Assignment bond and mortgage,		2 25
On account of loan paid,		1,100 00
Balance to new account,		802 68
Total,		$12,684 77

The present funds of the Society are—

Cash on hand,	$802 68
Cash invested,	2,000 00
Medals, plate, books, &c.,	371 35
Total,	$3,174 03

After the acceptance and adoption of the reports, a committee of three from each Judicial District were appointed and charged with the nomination of officers for the coming year, and the recommendation of a place for holding the next Annual Fair. The Society adjourned till 4 o'clock to give the committee time to report.

At the afternoon session, the following Board of Officers were reported by the committee, who were elected without an opposing vote:

President—**William Kelly**, Rhinebeck, Dutchess co.

Vice-Presidents—J. C. Jackson, New-York; A. B. Conger, Clarkstown, Rockland co.; George Vail, Troy, Rensselaer co.; Le Roy Mowry, Greenwich, Washington co.; J. C. Woodruff, Syracuse; J. Barber, Homer, Cortland co.; D. H. Abell, Geneseo, Livingston co.; S. M. Burroughs, Medina, Orleans co.

Corresponding Secretary—B. P. Johnson, Albany.

Recording Secretary—E. Corning, Jr., Albany.

Treasurer—B. B. Kirtland, Rensselaer.

Executive Committee—Edgar C. Dibble, Batavia, Genesee; Elon Comstock, Rome, Oneida; Charles Morrell, Ludlowville, Tompkins; T. B. Arden, Phillipstown, Putnam; Ambrose Stevens, New-York.

The committee also reported in favor of **New-York City** as the place for holding the next Fair.

Mr. **Elon Comstock**, from the committee appointed last year to examine and report upon the expediency of selecting permanent locations for the annual fairs, made a lengthy report, assuming to discuss the matter on either side. As opposed to a permanent location, three arguments were instanced. 1. The success which has hitherto attended the fairs of the Society. 2. The better accommodation of places remote from the great lines of travel. 3. The creating of a local interest by making the fairs itinerant. In favor of a permanent location the report makes six points. 1. Greater economy in management. 2. Greater convenience to exhibitors. 3. Increased facilities afforded for prolonging the exhibition. 4. Increased comfort to all interested, both man and beast. 5. Better order in the fairs. 6. Increased attendance and receipts. These points were maintained in an argument of considerable length, but the report failed of the desired effect in that, instead of generalizing upon the subject, it did not show the advantages of locating at some three places, naming the places at which the fairs should be held alternately. As it was, Mr. **Burroughs**, of Orleans, in an impassioned speech, made the friends of permanent location speechless, and after a little further discussion, the report was laid on the table, and ordered printed.

Mr. **Stevens**, of New-York, gave notice of a proposition to amend the Constitution of the Society, with a view to holding the annual fairs permanently in one or more places for a term of years.

That portion of the committee's report relating to location was now called up, and it was moved to amend it by inserting Syracuse in place of New-York, after which another amendment was moved that Elmira be substituted for Syracuse, but after a spirited discussion the proposition to substitute Syracuse for New-York, was lost by a vote of 52 to 50.

Wednesday evening, Prof. E. S. Carr, of the University of Albany, delivered an address before the Society, in which he argued that agriculture has not advanced as rapidly as it otherwise might, because science has not been applied to it. The chemical constituents of the soil are known, but the way in which they combine to produce the plant, the way in which the principles of science should be applied, is not thoroughly understood. We have no schools of agriculture,—the importance of its study is not recognized. The lecturer went on to speak of some of the more common facts with regard to the soil and the plant, and to explain how science came in to supply a want which every farmer must have felt. Prof. Carr spoke, as he always does, to the point and eloquently, and was listened to with marked attention.

On Thursday evening, the President delivered the closing address, in which he spoke of the importance of procuring pure seeds for all farm crops of introducing new grasses, and of irrigation as practiced in England, Lombardy and Switzerland, the practical working and benefit of which he had observed in a recent visit to these countries. He thought there was not a county in the State, the products of which could not be increased one-fifth by proper attention to irrigation. At the close of the address which was a sound and practical one, Mr. Morris introduced Mr. Kelly, the President elect, to the Society, who made an earnest appeal for the co-operation of the members in advancing the agricultural interests of the State.

Resolutions were passed, referring, in an appropriate manner, to the worth and services of the late John Delafield who was so active in promoting the interests of agriculture in the land. These called out a beautiful eulogium from Hon. John A. King, Queens Co., who had been associated with him, and from his connection with the proposed Agricultural College that subject was warmly discussed. Senator Dickinson, of Chemung Co., took part in this disscussion and argued that the farmer wanted skill which he could best acquire on the farm. He did not think that an Agricultural College was desirable. Major Patrick, of Jefferson Co., replied to him, and contended that the gentleman was a proof that such an institution was needed, for it was impossible to obtain this knowledge by real experience during an ordinary life-time; hence it was necessary to unite science with skill. He continued in an eloquent manner to advocate the necessity of such a school.

Notice was given by H. C. White, of Buffalo, that at the next annual meeting, he would propose an amendment to the Constitution, to the effect that the several Presidents of County Agricultural Secieties, or a delegate in their stead, be a State Board of Agriculture, and be empowered to elect a President, Secretary, Treasurer, and an Executive Committee of eight to carry on the business of the Society.

The Society adjourned in apparent good feeling, and with a determination to maintain its standing, replenish its treasury and increase its usefulness.

Executive Committee Meeting.

The Executive Committee met Friday, Feb. 10, and resolved to locate the next Fair in New-York, in case the requirements of the Society were complied with before the next meeting of the Executive Board. The President, John A. King, L. G. Morris, J. C. Jackson and B. P. Johnson were appointed a Committee to examine any locations that may be offered and report at the next meeting.

The Premium List was taken up and several alterations and additions were made, among which was a change in the premiums offered on Horses, so as to better divide the several classes, which was referred to a special committee; and so amending the Stock Premiums as to have a special class for imported animals and their immediate progeny; in which animals shall receive only first prizes in each sub-division; while the Premiums will remain as before on the stock bred in this country in each of the classes of Short Horns, Devons, Herefords and Ayrshires.

The Executive Committee ex-officio appointed a Committee, consisting of C. P. Williams, Albany, Charles Downing, Newburgh, J. J. Thomas, Macedon, Thos. W. Ludlow, Jr., Yonkers, Geo. Ellwanger, Rochester, John B. Eaton, Buffalo, to investigate the remedies for the ravages of the curculio, and report to the Society.

They also appointed the following gentlemen delegates to the Annual Meeting of the United States Agricultural Society—Hon. John A. King; Henry Wager; Luther Tucker; Francis Rotch; E. Corning, Jr.; J. Beekman Finlay; J. J. Viele; Lorrillard Spencer; P. Barry; H. W. Rogers: L. G. Morris; S. M. Burroughs; B. P. Johnson.

Winter Exhibition.

The show of fat cattle was not very large, but comprised some very superior animals. G. V. Sackett, of Seneca Falls, exhibited thirty head of well fattened cattle. W. P. & C. S. Wainwright, of Rhinebeck, showed a five year old Devon Steer, very fine; D. A. Bulkley, of Williamstown, Mass., a fat Steer, five years old; Robert Rome, of Geneseo, eleven head of cattle, among which three Spayed Heifers were worthy of special notice; George Shaffer, of Wheatland, Monroe co., three Spayed Heifers of the Devon breed, very large and fat; James Upton, of Greece, Monroe co., a pair of six year old cattle, a cross between the Durham and Devon, of remarkable size.

The show of swine was small. Col. J. M. Sherwood, of Auburn, exhibited a sow and two pigs of the Suffolk breed, which were very much admired. The Suffolks are model hogs, that is they contain the greatest possible amount of pork in the smallest possible compass, and withal they have a clean and good-looking appearance, which contrasts favorably with vulgar porkers.

Jurian Winne, of Bethlehem, showed two dressed pigs nine months and thirteen days old, the live weight of the one was 386 lbs., and the dressed weight 336 lbs.; of the other, live weight, 323 lbs., and the dressed weight 283 lbs. Mr. Winne had six of these pigs, and has kept an accurate account of the expense of feeding them. The profit on the six, reckoning pork at eight cents a pound, is $45. It will be noticed that the difference between the live and dead weight is very small.

N. Brownell, of Pittstown, Rensselaer co, showed six fat Merino wethers and two carcasses of the same lot dressed. The eight brought $80 for mutton. The value of the Merinoes for fattening has been set down at a low figure, but the experiment of Mr. Brownell goes to show that they may be made to yield a more than average quantity of mutton, and of superior quality to that of our ordinary sheep.

The show of poultry was not large, but contained some good fowls. No premiums were offered, but the committee commend the specimens offered by all the exhibitors. There was a moderate display of dressed poultry.

The show of Grain, Seeds, Butter and Cheese was fair. The specimens were all excellent, and in many instances very superior. The names of the principal exhibitors will be found in the list of premiums awarded.

There were several competitors for the premium offered for experiments with the potato, and most of the observations and trials extend over a considerable period of time.

The display of Fruit at the Geological Rooms was not as large as last year. The Pears from Ellwanger & Barry, the Grapes from John S. Goold, and the Apples from Western New-York, were all in fine condition.

Premiums were awarded as follows :—

EXPERIMENTS, &c.

Experiments with Potato—1. H. H. Eastman, Marshall, $125—2. George W. Burgess, Chatham, $75—3. J. B. Morse, Cazenovia, $50—4. W. Culver, Arcadia, Wayne co., special premium, $25.

Plans of Barns—L. F. Allen, Black Rock, first premium, $25.

Farms—S. L. Wattles, Sidney Center, Delaware co., (no competition,) third premium, $20.

GRAIN AND SEEDS.

Winter Wheat—1. Levi Shaw, Rensselaerville, $8—2. O. Howland, Owasco, $5—3. O. Howland, Owasco, $3.—T. C. Peters, Darien, for white blue stem, S. S. Medal and Trans.

Spring Wheat—1. David Conradt, Brunswick, $8—2. O. Howland, Owasco, $5—3. David Hess, Fenner, $3.

Oats—1. David Hess, Fenner, $5—2. Peter Crispell, Jr., Hurley, $3—3. James W. Jolly, Coeymans, $2.

Corn—Yellow—Volney Burgess, O. Howland, Owasco, E. S. Hayward, Brighton, each $5.

Corn—White—Levi Shaw, Albany, O. Howland, Cayuga, D. Conradt, Brunswick, each $5.

Rye—1. David Conradt, Brunswick, $5—2. Levi Shaw, Rensselaerville, $3—3. E. W. Bushnell, Hillsdale, $2.

Barley—2-rowed—1. J. Rapaljie & Co., Rochester, $5—2. Wm. Davison, Hartwick, $3—3. O. Howland, Owasco, $2.

Barley—4-rowed—1. O. Howland, Owasco, 48 lbs., (no competition,) $5.

Peas—O. Howland, Owasco, $5.

J. Rapaljie & Co., of Rochester, exhibited eight varieties of peas, each sample of which your committee consider to be very superior, and well entitled to a discretionary premium. *Silver Medal.*

Beans—1. O. Howland, Owasco, very superior, $5—2. David Hess, Fenner, prime article, $3.

Discretionary Premiums—D. A Bulkley, Williamstown, Mass., for large varieties of Corn, Wheat, Rye, &c., $5.

C. F. Crossman, varieties of Beans, Peas, &c., small Silver Medal and Transactions.

Buckwheat—1. O. Howland, Owasco, 53 lbs.

There was no competition in this article, but the sample exhibited is considered by the committee to be equal to any thing of the kind that has ever come under their observation.

Clover Seed—large—O. Howland, Owasco, 62¾ lbs. of superior quality, (no competition,) $5.

Clover Seed—small—Douw Van Vechten, Mohawk, 62 lbs. of superior quality, (no competition,) $5.

Timothy Seed—1. O. Howland, Owasco. 2. Douw Van Vechten, Mohawk.

L. L. French, Warren, Herkimer co., special premium on Peas, Beans, and Buckwheat Flour, $5, and vol. of Trans.

FIELD CROPS.

Corn—1. George K. Eells, Clinton, Oneida co., 2½ acres, 218½ bushels, $20—2. Ira Apthorp, Riga, Monroe co., 2 acres, 185 bushels, $15—3. E. S. Hayward, Brighton, Monroe co., 2 55-100 acres, 186½ bushels, $8.

Barley—1. Riley W. Hess, Fenner, Madison co., 16 acres, 3 roods, 35 rods, 779 22-48 bushels, (no competition,) $15.

Buckwheat—1. Charles W. Eells, Westmoreland, Oneida co., 1 acre, 6 rods, 32 bushels, 26 lbs., (no competition,) $8.

Peas—1. J. W. Jolly, Coeymans, 1 86-100 acres, 88 bushels, $8—2. N. Hitchcock, Jr., Homer, 1 acre, 3 roods, 5 rods, 74½ bushels, $3.

Carrots—1. E. S. Hayward, Brighton, Monroe co., ½ acre, 378 bushels, $8.

Beans—1. David Conradt, Brunswick, 1 acre, 12 roods, 30½ bushels, $8.

Timothy Seed—1. Douw Van Vechten, Mohawk, 1 acre, 5 bushels, 27 quarts, $5.

Winter Wheat—1. J. W. Waterbury, Jefferson co., 43 bushels per acre, $20.

Spring Wheat—1. Chas. W. Eells, Westmoreland, 38 bushels, 26 lbs. per acre, $15—2. Hart Massey, Watertown, Jefferson co., 31¾ bushels, $10.

Rye—1. E. W. Bushnell, Hillsdale, Columbia co., 3 acres, 3 roods and 20 rods, 163 2-56 bushels, $15—2. Hiram Converse, Pamelia, Jefferson co., 2 12-100 acres, 81 bush., $10.

Oats—1. J. W. Jolly, Coeymans, 76½ bushels per acre, (special premium,) $15.

FAT CATTLE.

Oxen—1. James Upton, Greece, Monroe co., $30—2. W. P. & C. S. Wainright, Rhinebeck, $25—3. James Upton, Greece, Monroe co., $20.

Steers—1. Robert Rome, Geneseo, $25—2. G. V. Sackett, Seneca Falls, $20—3 G. V. Sackett, Seneca Falls, $15.

Cows—1. Robert Rome, Geneseo, $20—2. Robert Rome, Geneseo, $15—3. Henry Hazen, Martinsburgh, $10.

Heifers—1. Robert Rome, Geneseo, $15—2. Robert Rome, Geneseo, $10—3. Robert Rome, Geneseo, $5.

Spayed Heifers—1. Robert Rome, Geneseo, $15—2. Robert Rome, Geneseo, $10—3. Robert Rome, Geneseo, $5.

Sheep—Long wooled—1. Robert Rome, Geneseo, $10—2. John S. Pratt, Cambridge, Washington co., $8.

Sheep—Cross Breed—1. Nathan'l Brownell, Pittstown, $10—2. Nathaniel Brownell, Pittstown, $8.

Discretionary—Geo. Schaffer, Monroe co., exhibited three very superior spayed Heifers. They were not presented for competition, but owing to their acknowledged excellence, the committee would recommend an award of $15.

D. A. Bulkley, Williamstown, Mass., a Fat Ox, $10.

Butter—1. Jonathan Ballard, 2d, Homer, $15—2. George B. Powell, Milton, Saratoga co., $10—3. Henrietta Daniels, Saratoga, $5—4. N. Hitchcock, Jr., Homer, Trans.

Cheese—1. John Winslow, Watertown, $15—2. Moses Eames, Rutland, Jefferson co., $10—3. George Clarke, Hartwick, Otsego co., $5. *Commended*—George Clarke, old Cheese, vol. Trans.

Discretionary Premiums on Butter—L. L French, Warren, Herkimer co., S. S. Medal and $5. This butter arrived after the judges had concluded their report. A special committee examined it.

FRUIT.

Apples—1. Largest and best collection, to R. H. Brown, Greece, Monroe co., for 28 varieties, Silver Medal.—2. A. B. Rose, Wyoming co., for 25 varieties, Downing's Fruit Book.—3. E. & E. S. Hayward, Monroe co., for 20 varieties; to Frank Atwater, Ithaca, for 16 varieties; to Henry Freeman, Richfield, for 14 varieties; to C. F. Crossman, Rochester, for 12 varieties, copies of Barry's Fruit Garden.—4. To Isaac Merritt, Monroe co., for 11 varieties; to Hart Massey, Watertown, for 11 varieties; to B. B. Kirtland, Greenbush, for 5 varieties, copies of Thomas' Fruit Culturist.—5. To J. H. Walts, Rochester; Isaac Foster, Hillsdale; William Bacon, Richmond, Mass.; J. Winslow and Wm. Robson, Westmoreland, Oneida co., for fine exhibitions, copies of the Society's Transactions.—A. Frost & Co., Rochester, for 21 varieties, Downing's Fruits.

Pears—Ellwanger & Barry, of Rochester, exhibited a collection of *twenty-seven* varieties, all of fine size and beautiful appearance, to whom is awarded a Silver Medal and Diploma.

Grapes—John S. Goold, of Albany, exhibited Golden Chasselas, Catawba and Isabella Grapes in fine edible condition, grown in open air and preserved in cotton, to which is awarded Barry's Fruit Garden. T. T. Beebe, Albany, for Isabella, Barry's Fruit Book.

Budding and Autumn Grafting.

I wish to make a few inquiries in regard to the propagation of the Peach and Apple. I do not find any thing in relation to fall grafting the apple. In budding the peach, you recommend leaving the wood in the bud. I have lately commenced a nursery; not more than one-half my apple trees took. A person from the state of New-Jersey said fall grafting was best for the apple, and grafted about 4,000. Please say what your experience is in this matter, as I may have been imposed upon.

In regard to the peach, I had about 6,000 budded in the early part of September, all the wood taken out; upon examination, I think I am safe in saying there are not five to the hundred missing. If, however, the wood can be left in with as good success, the operation can be performed much more speedily. I should like to know your experience in this. James Delaplaine. *Centreville, Delaware, Jan.*, 1854.

We have never tried out-door or stock grafting in autumn, but have been informed by those who have, that the long period elapsing after the operation and before the commencement of growth, in connexion with the frequent freezing and thawing which the place of union has to undergo, operate unfavorably, and that it has not been attended with much success. It is common to commence root-grafting in cellars in the depth of winter, and some months before setting the roots out; and being packed in a uniformly cool place, they suffer little or no detriment by the delay. If any of our readers have had experience giving different results, they would confer a favor by communicating the information.

With regard to the removal of the wood from the bud,—when performed early in the season, as for example in budding the cherry, we find it quite necessary to leave in a considerable portion of wood, to prevent the bud drying out. Later in the season, this is not so essential; if the stocks are thrifty and peel freely, there need not be a single failure in a thousand, even if the wood is left in. Some skillful nurserymen who bud Angers quince with the pear late in summer, are in the practice of removing the wood, which may perhaps induce the bud to lie more closely to the wood; others never remove the wood, but shave the bud off carefully and evenly, and scarcely ever meet with a failure. We never remove the wood from the peach, and on good stocks do not fail with one in a hundred.

Strawberry Destroyed by Grubs.

One question I will take the liberty to ask you respecting strawberry culture. Last April I prepared a patch of ground according to directions given in the Cultivator, and set my plants; they grew finely until the last of June, when they began to show signs of decay. I supposed it might be the drouth, which, by the way, was very severe in this section of country the past summer. I procured a quantity of spent tan-bark and mulched them two inches deep, but they did not improve; and to satisfy myself of the cause, I dug into the hills and found one or more large white worms with a brown head, commonly known among the farmers as the dung worm. They had eaten the roots of the plants. Willis P. Sargent. *West Amesbury, Mass., Jan.*, 1854.

The want of a description prevents us from identifying the grub alluded to. We have not met with any thing of this sort in connexion with strawberry culture. If the grubs are few, doubtless they might be easily dug out and destroyed when their presence is first detected. We have sometimes found it an easy way, when other crops have been attacked by grubs, to offer boys a certain sum per dozen for all they could find.

Time for Grafting the Apple.

Mr. Tucker—Please inform me through the Cultivator the proper time for grafting the apple. W. S. *Canada West.*

The best time is the spring when the buds are beginning to swell, the scions for grafting having been cut a few weeks previously, and kept in a moist cool place, or in a box of damp moss in a cool cellar, so as to be neither shrivelled or water-soaked. Grafts may be cut and inserted the same day, if the buds have not swollen much. Grafts are sometimes set much later, but starting so late, they do not make so good a growth during the summer.

Place for Grape Borders, &c.

Intending to erect a grapery in the spring, I wish to propose a few questions, namely:—

1. Should the root of the grapevine be placed outside of the grapery and the vine allowed to pass through an aperture in the side of the building, and thus be exposed to the action of the frost upon one side and artificial heat upon the other? (*a*)

2. Should the roots, in like manner with the vine, be permitted to seek a place within and without of doors? If not, which should be prefered; *i. e.*, ought the roots be wholly confined within the limits of the grapery or entirely excluded? (*b*)

3. Would it be necessary to take the vines down and cover them during the winter, either in a cold or hot house? (*c*)

4. Can you tell me where the black or Florida Fig can be obtained? Also I would like a little history of the "twice bearing kinds." If there is a place in the world where I can obtain some Fig trees, which will *hold true to the name* under which they are sent, I shall feel thankful, for you know the nurserymen are very naughty about such things.

The grapes are all to be foreign varieties. (*d*)

An answer given in the Country Gentleman, by some one who has had practical experience, will be very thankfully received and long remembered by A Subscriber. *Utica, N. Y.*

(*a*, *b*) Borders for grapevines are sometimes wholly without, and sometimes partly without and partly within. A principal advantage of placing them without is, the rains falling upon them obviate the necessity of supplying them wholly with artificial watering, which is quite a formidable task in a large grapery, with ten thousand broad leaves constantly breathing off moisture. When the vines are planted outside, the stems enter the house at the surface of the ground and close to the wall, and are scarcely exposed to the frost. The roots being mostly 2 or three feet below the surface in the deep artificial border, are not injured by cold. Even a very few inches of earth will prevent injury to exotic grapes, whether vines or roots.

(*c*) The vines are taken down late in autumn, pruned, laid on the ground, and covered with leaves or evergreen boughs, for winter. This rule applies to all houses where artificial heat is not kept up during winter.

(*d*) We presume most of the large nurserymen of the eastern cities have the different varieties of the Fig, but do not know with certainty where the Black fig can be had correctly. J. FISK ALLEN, of Salem, Mass., has given much attention to the culture of the Fig, and could undoubtedly give all the needed information.

Insect on Fruit-Trees.

The last autumn, in taking a review of my fruit trees, I discovered something new to me on the peach and Morello limbs of the last summer growth, of which I send you three pieces of limbs of the peach, that you may see them and make an examination of them; they may be something new.

I wish you to inform me of some work on the grape and its culture in full. E. S. D. *Warren Co., Pa.*

On examining the twigs, we find them punctured with rows of holes, extending lengthwise with the shoot from an inch to an inch and a half in length in each row, each puncture containing an egg deposited in the pith; some twenty or thirty eggs lying in each row. We have often met with them before, in peach, cherry, and plum trees, more frequently in the younger trees of the cherry. Some years since, they were so numerous on cherry trees that it was with difficulty that uninjured scions could be obtained for grafting. No serious evil, so far as we know, ever resulted from the insect punctures, except the mechanical injury to the young shoots, the growth of which, when they are numerous, is retarded. Their discovery for the first time, by some fruit growers, has led them to imagine that they had at last discovered the great secret of the black knot or excrescence; but although we have watched them for many years, we never found this result from them in a single instance. We have never discovered the insect in the act of depositing the eggs, but from their manner of cutting or perforating the limb, infer that it is something of the *Cicada* family.

An insect which makes similar punctures in branches of the *Filbert*, but on a much larger scale, has nearly destroyed all our best bushes—the injury being mechanical.

The best Treatise on the Grape, is that of J. FISK ALLEN, of Salem, Mass., prepared from extensive practical knowledge. A smaller work, of much practical merit, on the management of *cold graperies*, has been lately published by WM. CHORLTON, of Staten Island, N. Y.

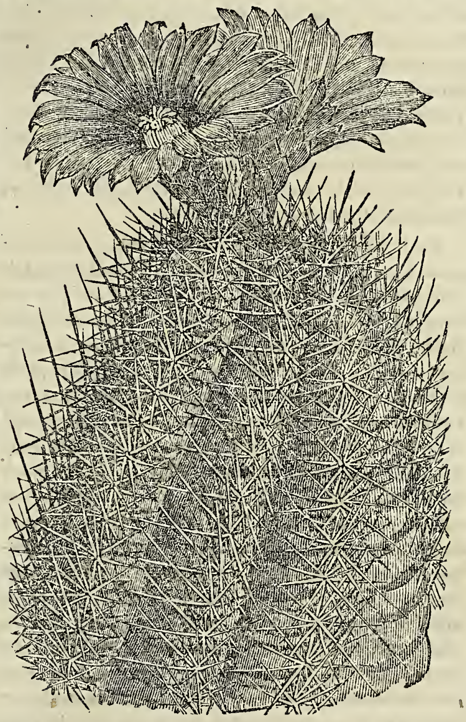
Easy way to have Parsley all Winter.

The following is an easy method of growing this useful little herb, so as to have it fresh and green all winter, for garnishing or flavoring, which every family may adopt without trouble or expense. I do not know if the plan is generally known; if it is not, I consider it worth knowing.

Take a good strong half-barrel or whole barrel sawn in two; then with a half or three-quarters inch auger, bore holes about four or six inches apart, all over the side. Then in the fall, say November, dig up out of the ground, strong parsley roots, trim and separate them begin at the bottom of the barrel, and insert the crown of one plant into each hole, and fill up with any light soil, as you proceed, till you reach the top, and a few roots may be planted on the top. Place the barrel under the stage in the green-house, or in a warm cellar or kitchen, or anywhere where it can get a little light and warmth. It will not take up much room anywhere, and is not dirty. It will not only supply you with abundance of parsley, but if you have the fine curled variety, its greenness and beauty are not its least attractions. C. S. *Cincinnati.*

New Mexican Cactus.

Some of the most interesting and curious greenhouse flowering plants belong to the cactus tribe, and their singular appearance and brilliant flowers have long since rendered them favorites. We furnish in the annexed engraving the representation of a new plant introduced to cultivation from the neighborhood of San Louis Potosi in Mexico, in the year 1847. It is six inches or more in height, and thickly covered with rows of spines, each spine about an inch long. The flowers are large, rose-colored, with dark red at the base. It flowers during the summer.



EXTIRPATING WILD ONIONS—INQUIRY.—Pray will you be kind enough to inform the readers of your valuable periodical of the most practical way of eradicating wild onions from the soil. Yours very respectfully, I. S. C. *New Brunswick, N. J.*

Will some of our readers answer the above?

Perpetual Bearing Strawberries.

In compliance with your request in the last number of the Country Gentleman, I am happy to give you briefly Mr. PEABODY's method of cultivating Hovey's Seedling and Early Scarlet strawberries at his residence in Columbus, Georgia, so as to ensure them in continual bearing from March till January following.

Mr. C. A. Peabody is the Horticultural Editor of the "Soil of the South," at Columbus Ga., and besides his published account, I have by a personal interview, learned every minute particular of his method. In addition, in our correspondence during the past season, Mr. P. has in different months sent me specimens of his ripe fruit, pressed upon his letters, in proof of their being still in bearing, and on the 20th Dec., he took up earth, fruit and plants, some 20 plants in full bearing, and sent them in that condition to Messrs. Thorburn, & Co., by express, which delivered them in perfect condition on the 24th Dec., loaded with fruit from the size of a large pea to the full ripe Hovey, of three inches in circumference. There could be no mistake. They were the genuine Hovey Seedling. The leaves were very small, generally about the size of a shilling piece —never as large as a two shilling piece, and I noticed one plant with scarce half a dozen of those small but very vigorous leaves, and ten or more Hovey's berries, a number of which were fully ripe.

Mr. P. has no doubt they can be raised North, with great ease, so as to ripen continually from June to the time of frost in September. He says: "We are astonished that in the moister, colder latitudes of the North, they do not have strawberries from frost to frost again." In his directions he says, the four great requisites are "proper location, vegetable manure, shade to the ground, and *Water, Water, Water!*" In regard to location, he says: "No plant or tree should be near the bed; the strawberry bed loves a shade, but not a shade that sucks its very life blood out." The lowest part of the garden, the bank of some little stream of water, are proper localities, and when it is possible select new land. As to soil, our beds are on as poor pine land as Gopher or Salamander ever built into pyramids." Next, "use only vegetable manures; and the whole secret of strawberry culture is to cultivate for fruit and not for vine or blossom. The groud designed for the strawberry bed should be plowed or spaded as deep as tools can well make it. If the soil is light and thin, a thick coat of swamp or muck partially decomposed leaves, with leached or unleached ashes will fine to turn under. Place the plants, when the ground is thoroughly pulverized and levelled, two feet apart. If fruit be the object, cover the whole surface of the ground with partially decomposed leaves or straw, and as the first runners begin to show themselves, take them off. When the vine has once commenced fruiting, it will show little disposition to run if not over stimulated. The plants must have water to set the fruit and swell it when set. We care not how much water they have when in bloom. If the seaon proves dry we give water to set the fruit by artificial rain; and unless it rain twice a week, we give artificial rain to swell the fruit, and then we give artificial rain to set the next fruit stems, and all this notwithstanding the thick mulching or moist location. Fear not to give too much water, morning and evening."

Mr. P. also says we tried "five square yards by watering with highly fertilized liquid manure morning and evening, superadding copious waterings of pure water. The crop of vines was enormous—it was impossible almost to keep the runners down—the plants produced only one crop of fruit, and that no larger fruit than from the dwarfish vines around. Under our hot sun, these long stems lie wilting on the ground, while their brothers around hold up their shiny heads, rejoicing as well in the noon-day sun as in the dewey eve."

I might add more, but I think I have been particular enough—if not, I will be glad to write on any other point.

From my observation during the past few years, I am inclined to the opinion that Mr. Peabody's plan, thoroughly carried out, will succeed at the North. You will bear me witness that I have long harped upon the pre-eminent importance of cultivating the strawberry for the fruit and not for vine and blossom.

Those acclimated or trained Hovey and Scarlet vines I have taken care of in a hot-house for future experiments. It will take a year or two, with vigorous, large leafed Hoveys, to reduce their habits so as to conform easily to this treatment and bear freely without feeling the shock of the new treatment.

I regret I cannot on my favored garden spot in Palmyra, give this method a fair trial. It was not until the last fall I became fully acquainted with the details of Mr. Peabody's plan, and now I must transfer the experiment mainly to our friends in the country.

New-York, Jan. 24, 1854. R. G. P.

Hautbois Strawberry and Charter Oak Grape.

MESSRS. EDITORS—I wish to know if the strawberry known as the Prolific or Conical Hautbois is a good marketable variety; also if the Charter Oak grape is a valuable kind of grape for garden culture. Your opinion on the above mentioned fruits through the Cultivator will be thankfully received. Yours, S. HINMAN. *Augusta, N. Y., Jan.* 9, 1854.

The Prolific Hautbois has two qualities that greatly increase its value for market, and these are its high fruit stalks, which raise the fruit above the leaves, and thus facilitate gathering as well as keep the berries clean; and its unequalled vigor and hardiness of growth. Its musky flavor is a great drawback on its general popularity, as most persons will reject it when they can get other strawberries, while a few prefer its peculiar flavor to all others.

The Charter Oak grape is very large, but from a little experience with its flavor, we incline to the opinion that it can never be much esteemed.

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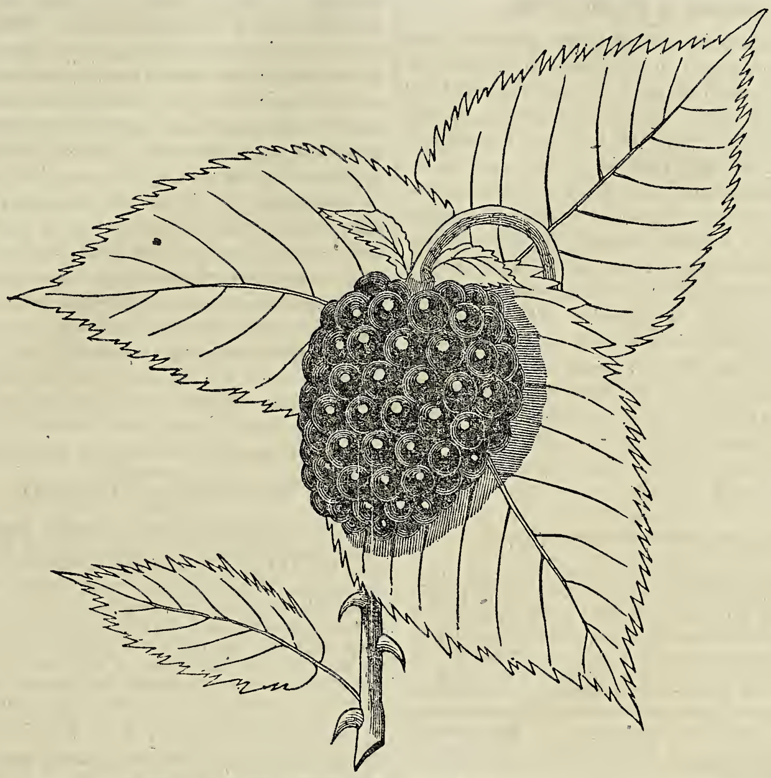
TO THE POINT.—A subscriber, in remitting his subscription, adds the following: "P. S. Keep to the practical, if you would *plow* among farmers. Publish all the well made experiments, and induce farmers to note their practice and its results."



The Lawton Blackberry.

We have been furnished with the above engraving, representing the fruit and leaf of this newly introduced blackberry. A basket of the fruit was presented to the Farmers' Club of New York, in August last, by Wm. Lawton, Esq., of New Rochelle, and they gave it the name of "Lawton Blackberry." Mr. L. says it has been cultivated, in small quantities, for several years, in his vicinity, but that he has not been able to ascertain who first discovered the plant, but is informed that it was found on the roadside, and thence introduced into the gardens. He thinks it a new variety, distinct from any heretofore noticed. The fruit, it will be seen, is much larger than the common blackberry. "It sends up," says Mr. Lawton, "annually large and vigorous upright shoots with lateral branches, all of which, under common cultivation, will be crowded with fine fruit, a portion of which ripens daily in moist seasons for six weeks, commencing about the middle of July. They are perfectly hardy, always thrifty and productive, and I have not found them liable to blight or injury by insects."

Dwarf Pears and Quince Stocks.

Please inform me in relation to the dwarfing of pears —how to raise the quince—when to bud—how to manage afterwards, and a dozen or so of the best varieties to work on the quince, all things considered—also, whether any other variety of the quince will answer. E. Bonsal,l Jr., *Salem, Ohio.*

We have already given full information relative to the training and management of dwarfs, and lists of some of the best sorts, and the relative value of the common quince for this purpose,—for all which our correspondent is referred to back numbers. We may now add, that the Angus quince is best propagated by first cutting down strong trees to the surface, so as to throw up numerous shoots, and then banking the soil about them for one entire season, until they have thrown out numerous roots, when they are removed and separated. Cuttings set late in autumn or very early in spring, in moist, fertile earth, will afford good moderate sized plants by autumn, but most of them will fail to root, under ordinary management. Plants may likewise be procured by layering, but these are more or less crooked from the necessary bending of the layers.

The budding is performed late in summer, or early in autumn, whenever the bark will peel freely. If done earlier, the buds are apt to start prematurely. The after management we have already described. The following pears are among the best for quince working: Angouleme, Winkfield, Osband's Summer, Louise Bonne Jersey, Diel, Easter Beurre, Doyenne Boussock, Tyson, Stevens' Genesee, Glout Morceau, Beurre d' Amalis, White Doyenne, Dearborn's Seedling, &c.

Disease in Peach Trees.

James Hamilton, of Carlisle, Pa., gives us a description of a disease in the peach tree, observed in that region, and which we do not remember to have seen described before. Soon after blossoming, the sap appeared to exude from the axils of the twigs and sometimes of the buds, as if through a perforation by insects. None however could be discovered by the microscope. Sometimes the bark at these places was coated with a blackish substance, the limb became sickly, the leaves fell, and the forming fruit dropped off. Some branches died, others recovered. The remaining fruit attained perfection. The malady appeared to spread from tree to tree. Late peaches were most affected—the Early Tillotson entirely escaped. The trees in a portion of the garden where ashes were applied most copiously, were least affected. Washing with soap appeared slightly to mitigate the evil. Tobacco water from a syringe did no good. Some orchards within half a mile were entirely free from this disease.

Nurseries and Nursery Agents.

You would oblige your subscribers and many others in this part of our state, at least, if you would procure and publish the names of the *reliable* nurseries in Rochester, N. Y., as agents have been canvassing our state, and have engaged to supply any number of apple and other fruit trees the coming spring, said to be grown in that place. Any information or remarks from your pen relating to the subject of transplanting trees from New-York to Maine, will be interesting to the Maine readers of the Cultivator. Respectfully yours, Benj. Adams.

Among the numerous and extensive nurseries at Rochester—exceeding together in extent as they do, those of any other city in the Union, if not in the world,—it would be presumptuous to point out such as may be strictly reliable, as no one individual can be expected to know all the intricacies of operations performed during the whole year by each establishment. Each purchaser will probably have his preferences and dislikes. It is due however, to established nurseries generally, to say that the dissemination of pomological knowledge of late years, has effected a great improvement, and rendered them far more accurate and reliable than formerly, and as a general thing such nurseries may be depended upon in most cases for fruit trees which they may furnish. Those who have been familiar with horticultural publications and with general intelligence on these subjects from similar sources, are usually able to give reliable advice in their respective neighborhoods as to the best nurseries to purchase from. Trees may be safely removed from Rochester to Maine.

We would advise our correspondent, however, to receive with *extreme caution* any applications from persons claiming to be agents of nurseries of established reputation; because we happen to know there is an immense amount of imposition practiced by such persons on the community. It is common for such dealers of trees to traverse the country to obtain purchasers, and then to buy the trees to supply their orders, wherever they can buy them at the lowest price, without much regard to accurate sources. It commonly happens that there are both rogues and honest men in all occupations; but there is more temptation and less restraint on itinerant tree dealers than on any other men, for they may furnish spurious sorts without detection till years afterwards. We have known a few reliable and worthy men of this class, but they were the exceptions. On the other hand, we have known many who were in the practice of using the names of the best nurserymen to shield their frauds, and thus, with double injustice, injuring the reputation of such establishments. Some good nurseries employ traveling agents; they may be purchased from, provided they can give satisfactory assurances of their agency. *But we would greatly prefer sending our orders directly to the nurseries;* skill in packing, and cheap and quick railway conveyance, renders this mode about as cheap as any, and infinitely more satisfactory.

Renovating old Orchards.

Messrs. Editors—I have recently purchased a small farm on which there are about 40 apple trees from 6 to 14 inches in diameter at about 3 feet from the ground. They are growing in an old meadow which has not been plowed for many years. The trees have been untrimmed, and neglected, doubtless, in every way. The fruit last fall was of different kinds, but all agreeing in diminutiveness of size and poorness of quality. Permit me to inquire how the size and quality of the fruit may be improved by culture; but if the trees are too far gone to be greatly improved, what shall I do with them? I am loth to "cut them down as cumberers of the ground," as I shall have to wait many years for trees to grow to bearing size. Very respectfully, George W. Savage. *Rahway, N. J., Jan. 23, 1854.*

If this orchard consists of good varieties of fruit, which have become worthless from the entire neglect of the trees, their recovery is a very simple process. Manure the land well with yard manure, and one-tenth to one-twentieth its bulk of ashes, and if convenient, half that quantity of lime or thereabouts; plow deep, and work the soil thoroughly, and a new impetus will be given to the growth of the trees. At the same time thin out the thick, decayed and stunted branches, leaving the best and most vigorous, *evenly throughout the head,* taking care to make no very large wounds, and avoiding, especially, the common practice of thinning below, and leaving all the brush above. Instead of this, thin out the *exterior* of the head, so as to let in the sun on the outside, without diminishing the *size* of the head, except to improve its *shape.*

Unless the trees are too far gone in age and decay, this treatment will soon restore vigor, and improve greatly the size and quality of the fruit.

If the ground is not too much shaded by the broad tops, crops of potatoes, beans, rutabagas, carrots, or any other low hoed crop, may be advantageously taken from the enriched soil.

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The British American Cultivator says that a strong wash made of pearlash and water, applied thrice a day, will remove tumors and warts.

Impermanent Manures the most Permanent.

This, at first view, seems to be contradictory. But let us look at it. Let us see whether the most impermanent manures, under a sharp, wide-awake system of farming, are not the most permanent in their effects.

A permanent manure is one, in which the plant-feeding ingredients are so far insoluble, as in coarsely crushed bones, for instance, that the plants take but little of them the first year, little the second, and so on for 20, 30, and sometimes more years. The farmer would hardly wish his manures to be permanent in this respect, because they do not give him back their money value sufficiently quick. He desires a speedier return for the value of his manures at the time of their application.

An impermanent, or quickly acting manure, on the other hand, is one in which the plant-feeding ingredients are so far soluble, that the plants take nearly or quite the whole of them the first year. The strength of the manure goes to the first crop. And yet I contend that the effects of this manure, under good management, are most permanent; because it quickly produces an increase of crops. This increase of crops, if expended on the farm, leads to an increase of stock, that to an increase of manure, that to a still greater increase of crops, and so on permanently, as long as the good management is continued. In this way will a farm soonest become rich; and not only so, but it will become capable of keeping itself rich, without the addition of manures from abroad; and thus it appears that the most impermanent, quickly acting manures, may really be the most permanent in their effects.

It is well for the farmer to apply such home fertilizers as he may have at command, though some of them may give him but a slow return. As they cost him but little, he can afford to wait for the result. But when he purchases manures, it should be with the expectation of getting the whole cost and something more back in the first crop. N

Clearing and Cultivating New Land.

Messrs. Editors—Premising that I have sixty acres of land, twenty of it bottom and forty of upland, all timbered with oak, 'good corn or wheat soil,' and that I am a novice, I take the liberty of making the following inquiries:

1. What is the best method of bringing the bottom into meadow?

2. What is the best method of clearing the upland so as to put in a crop the coming spring, and what crop?

3. To what purposes should the land be devoted so as to make it profitable?

4. What portion should be reserved for woodland?

5. If an orchard is to be set out, what situation would be best, a northern, southern, eastern or western exposure?

6. What books would prove of benefit to me, the price, and where to be procured? An answer will much oblige Novice. *Pine Grove, Gallia county, Ohio, Jan.* 13, 1854.

1. Having never settled in the "back woods" or "out west," we cannot speak from actual experience as to the best way of clearing new land, and bringing it into cultivation. No doubt the mode of clearing would be much modified by the character of the timber, its uses, distance from a lumber market and saw-mill, value of fire-wood, &c.

2. It often happens that by thorough harrowing, a sown crop may be put in new land before it is in fit condition to plow, but for ordinary cultivation, the sooner the stumps are extirpated the better, and to assist their decay, a pile of turf or earth placed on each is a good thing.

3. The most profitable cropping must depend on the peculiarities of the locality—the capacity of the soil, nature of markets, &c., but in all places, a good rotation, which shall enrich instead of impoverish the soil, is indispensable. The nature of this rotation, and the system of cropping pursued, must be founded on principles laid down by the best writers, assisted by the best general practice, and by the farming of the best cultivators in that particular region.

4. The portion reserved for woodland must depend greatly on circumstances—the probable value of timber in future years—the amount of fuel required—the present value of the land if cleared, &c. We have never been able to learn the precise number of acres required to keep up a certain continued supply of fuel, without diminishing the woodland; and if any of our readers possess any definite information on the subject, they would confer a great favor by communicating it.

5. Elevated portions of land are best for all tender fruits—with hardy sorts, like the apple, they are still best, but not so indispensable. Tender fruits should have a northern or western exposure, rather than a southern or eastern, as this exposure hardens them, and prevents destruction by frost.

6. The "American Farmer's Encyclopœdia," ($4,) for farming, and the "American Fruit Culturist," ($1,) for fruit. They can be had at most bookstores.

Mowing Machines.

Messrs. Editors—I am pleased to see you answer your correspondent so explicitly in regard to mowing machines. I have taken much pains to examine other kinds, and have come to the conclusion that Ketchum's machine is by far the best yet made.

I think the improvements he has made by an entire change of gear, and by the addition of the counter-balance, which acts as a balance wheel to regulate the motion of the knives, have added greatly to the value and durability of the machine.

With a good team, tolerably good mowing ground, and observing the directions, which are plain, there is no fear of a failure. Stones and sticks should be cleared from the ground. One who has used one. *Connecticut, Feb.* 6, 1854.

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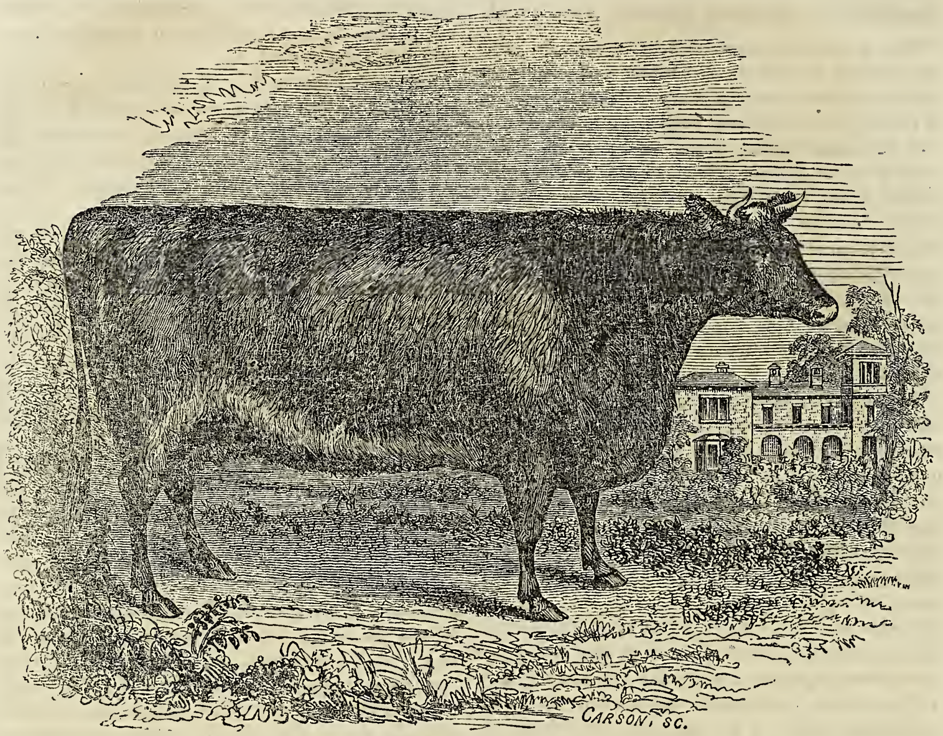
Fancy Poultry in England.—The Mark Lane Express, speaking of the last poultry show at Birmingham, says that the "best classes were the Dorking and the Spanish. The Cochin Chinas or Shanghais were as plentiful as ever, but never did they seem to attract so little notice, and never, certainly, to command so little admiration."



Improved Short-Horned Cow Jacintha, from a drawing by H. Strafford, Esq.

The Property of Lewis G. Morris *and* Noel J. Becar, Esqs.

We have great pleasure in publishing this portrait of Jacintha, as we consider it one of the best yet executed in this country. It is reduced from the original drawing in the Herd-Book by Mr. Strafford, the present editor of that work, to whom many of our countrymen, while in England for the purpose of purchasing or examining the best English herds, are under great obligations for attentions and facilities which were of essential service, and which will long be held in grateful remembrance. For its accurate reduction and drawing on the block, we are indebted to Mr. E. Forbes, of New-York.

"Jacintha," calved Feb. 15, 1846, was bred by Mr. T. Beasley, Overstone, and purchased by L. G. Morris, Esq., in 1852, though not brought over till Oct., 1853, of Mr. J. S. Tanqueray, Hendon, an account of whose celebrated herd of Short-Horned cattle was published in the Country Gentleman of 1st Dec. last. She is now the property of Messrs. Morris and Becar, who also own a bull calf, sired by their imported bull "Balco," (9,918,) dropped by her previous to her shipment last summer, and not as yet brought to this country. We copy her pedigree from the Herd-Book:

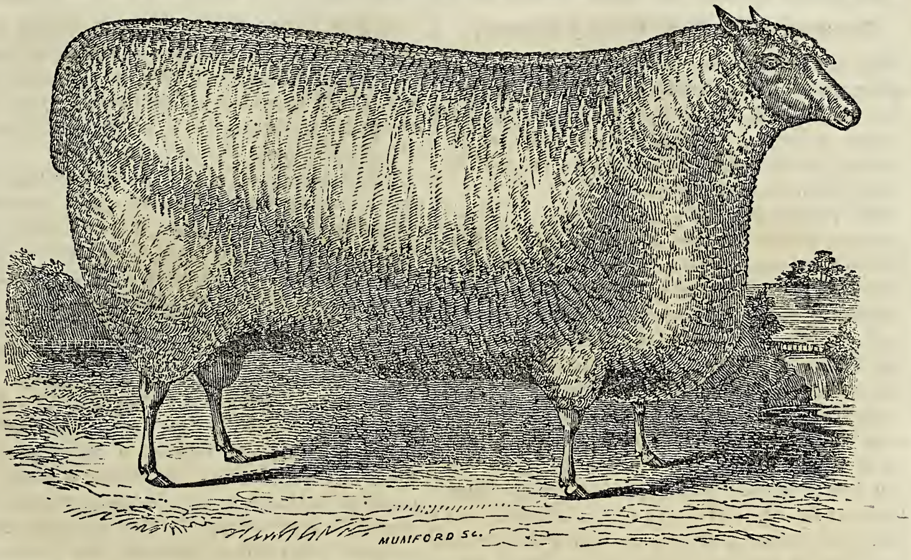
Jacintha, red, calved Feb. 15, 1846; got by Fawsley (6,004)—dam (Junta) by Warden (5,595)—g. d. (Joyance) by Javelin (4.093)—gr. g. d. (Joy) by Blyth (797), —— (Jannette) by Wellington (684), —— by Phenomenon (491), —— by Favorite (252), —— by Favorite (252), —— Favorite (252), —— by Hubback (319), —— by Snowdon's bull (612), —— by Waistell's bull (669), —— by Masterman's bull (422), —— by the Studley bull (626.)

Inquiry about Cattle.

Mr. Tucker—Dear Sir—I wish to make a few inquiries through the columns of your paper, if you think it proper, respecting my *cattle.*

I wish to ascertain the *cause* why my cattle have such a hankering for old *bones*, *boards*, *chips*, and old *leather;* they will take an old bone, boot or shoe, and chew it for hours. Last summer my cows found a pile of old bones in the highway, about fifty rods south of my house, and every morning as soon as they were turned from the yard (having to cross the highway to the pasture,) they would run for the pile of bones as though a dog were close upon them. I may add, that such were their inclination for old bones, that there was no stopping them until each one had a bone, to carry with them to the pasture—then they would stand and chew it for hours before eating any thing. Those that seem to be the most affected in this way, gradually lose their flesh and become very poor; they seem to eat well, but appear very dumpish—stiff in the joints and weak across the back, so much so that they can hardly move. Now sir, if I could be rightly informed of the *cause* and *remedy*, you would confer a favor which would be highly satisfactory.

P. S. I have fed my cows for a remedy, bone meal, ashes, rock salt, and old bones dissolved or made soft by standing in a solution of lye and potash. This they eat very voraciously, but all of my experiments have been very much limited, as I have not been certain that either of them would effect a cure. Yours truly. A. T. Tuttle. *Enfield, January* 12, 1854.



New-Oxfordshire Ram,

New Oxfordshire Sheep.

There are many breeds of sheep in our country and each breed, undoubtedly, has its advocates. With some, the French Merinoes are the sheep par excellence, while the Spanish and Silesian Merinoes and Saxons have each their advocates. Which of these fine wooled varieties is best, I leave for others to decide; they all have their merits, and for *fine wool*, are undoubtedly superior to any of the breeds called Mutton sheep; but while the greater part of our farmers give their attention to the raising of *fine wool*, it is fortunate that a few turn their attention to producing *fine mutton;* and for this purpose, I think there can be no doubt the new Oxfordshires cannot be excelled, if even equalled. They are *large* and *lazy*, (the latter quality, it is well known, is very favorable to the taking on of fat,) have *short* limbs and wide and deep chests with hardy constitutions and a great aptness to fatten, and with all, shear *heavy* fleeces of *very long* silky wool. A year ago this winter I purchased three of these sheep, of John T. Andrew, Esq., of West Cornwall, Ct., and I have just purchased four more fine ewes, of the same gentleman, which he assures me have all been with his new buck that he had purchased at great expense, and which, he thinks is the best buck in America of his age. Should I be fortunate in raising lambs I hope to be able to show something pretty nice by another fall. I have one sheep, two years old, of my first purchase, that would make an epicure's mouth water. E. L. Holden. *North Clarendon, Vt., Jan. 16th,* 1854.

Horn Distemper, &c., in Cows.

Messrs. Editors—I have from my boyhood, been acquainted with, and administered for the disease in cows called Horn Distemper, Horn Ail, &c., and have never failed of effecting a speedy cure, nor did my father, who for many years used the sama simple remedy,

As I have but little faith in the medicine generally used in this disease, and as I abhor the unwarrantable, murderous quackery of administering cider brandy in any case to the brute creation, as is the practice of some of our illiterate country cow doctors, I have concluded to solicit of you, for the benefit of your readers, the privilege of giving them my mode of cure.

My rule is to prescribe immediately after the symptoms appear, which are, want of appetite, coldness of the horns, dryness of the nose, and dullness of the eyes. With a small gimblet I bore a hole about three inches from where the horn connects with the head, into which, with a small syringe, I inject once a day, about two table spoonfuls of vinegar, to which there has been previously added of each, one tea spoonful of black pepper and salt. The hole should be kept closed with some kind of wax, except when administering the medicine. Charles Babcock.

Profitable Sheep.

Messrs. Editors—Seeing a statement in the Country Gentleman, of B. H. Harvey, in regard to sheep husbandry, I take the liberty to inform your readers that we can do something away up here in northern Vermont. My friend Ishmael Comstock, makes the following statement. He had 14 sheep, of what is called the Native sheep, which sheared

66 lbs. of wool that sold for 40c. per lb.,	$26,40
8 Lambs, $1,50,	12,00
6 Lambs, $2.00,	12,00
1 Lamb, sold when young,	50
Making,	$50,90

or an average of $3,62 per head. Said sheep were kept where they could run in and out of a shed at pleasure, and had nothing but good hay, and plenty of water if they had a mind to go and get it. They have a good plank floor that keeps them dry. I have not given the cost of keeping, but we probably can keep sheep at as little expense as any where in the country. Wm. Brewster. *Enosburgh, Jan.* 13, 1854.

The New-York State Poultry Society.

The list of Premiums offered by the Society were thrown open to the competition of the country, and Albany was fixed upon as the place for holding the first Annual Exhibition. The exhibition commenced on Tuesday, the 7th inst., and was continued during Wednesday, Thursday and Friday.

Van Vechten Hall, the place of holding the show, presented a rare collection of fowls of every possible form and hue, such as has never before been gathered in this country at one time and place. The different varieties of the *Asiatics* figured most largely in the display, but representatives of almost every known class of domesticated birds were present. The aristocratic Game Fowl looked proud defiance at the larger proportions of the quiet and corpulent Shanghai; the noble bearing and glossy plumage of the Black Spanish showed in fine contrast with the uneasy air and dull feathers of the Hamburgs; the Golden and Silver Spangled Polands stood side by side with the trim and well-built Dorkings; the wee Bantam was there in his beauty, looking wonderingly at his distant relatives, the Chinamen. The gobble of the Turkey was heard, strangely out of tune with the squeak of the Guinea Fowl, and the shrill tenor of the crow of the smaller cocks did not chord well with the cracked bass of the long necked Cochin Chinas. Then there were Aylesbury, Black Cayuga, Muscovy and Top-knot Ducks; Bremen, Chinese, African and Wild Geese; fan-tailed, ruffle-necked, carrier, tumbler, spot and Malta Pigeons; Chinese and English Pheasants; Prairie Hens and Quails; a pair of American Eagles, and a long row of Black and Tan and Rat Terrier Dogs, that constituted a sort of special police, charged with the guardianship of the assembled convention of poultry.

There were in all something more than fifty exhibitors, and the number of fowls on exhibition is estimated at from twelve to fifteen hundred. Among the more prominent exhibitors from this section may be mentioned W. H. Southwick, of New Baltimore, who showed over thirty coops of varieties; J. W. Platt of Rhinebeck who had nearly the same number; E. E. Platt, Albany, who exhibited more than twenty coops; G. M. Van Alstyne, Greenbush, ten coops; Geo. Anderson, Albany, ten coops; C. W. Goddard, Albany, five; and numerous other smaller exhibitions.

Among exhibitors from a distance, D. P. Newell, of Rochester, made a very extensive show. The first premium was awarded him for that variety of Shanghais known as Brahma Pootras, and these fowls were certainly very fine. They did not show the coarseness and slovenliness of some of the large fowls, and are bred very true to color. They were more compactly built and of more beautiful proportion than any others of the same variety we ever saw.

Mr. McGowen, of Philadelphia, exhibited one cock and two hens of the Buff Shanghai, imported by Mr. Rudman of Philadelphia, which were very much admired. They were symmetrical in form and their plumage was faultless. The owner refused $150 for the trio.

Mr. J. P. Childs, Woonsocket, R. I., showed some choice specimens. Among these we noticed four superior cocks and four hens of the Chittagong variety, one cock and two hens of the Black Spanish, which were most perfect specimens of the breed, and a trio of inimitable little Seabright Bantams.

Wright, Gilmore & Co., of Utica, made a large display of the different varieties of Shanghais, which were of more than medium quality. R. C. McCormick, Jr., of Jamaica, L. I., also made a creditable display. Among other exhibitors from a distance were T. B. Miner and W. G. Hart, of Clinton; A. Hudson and John C. Hanchett, of Syracuse; D. S. Heffron, R. U. Sherman and W. Bates of Utica; L. D. St. George, of Oneida Co.; and J. W. Herring of Onondaga Co. We have not space to speak at more length of the exhibitors or the relative merits of their stock. The whole affair passed off to general satisfaction, and every one is willing to acknowledge that the rearing of poultry at present prices is a great business. It commends itself, however, to those who keep fowls for ornament and as a pastime, rather than to those who raise poultry for market and for the eggs. Still the advocates of the Shanghais insist that they are intrinsically worth from one-third to one-half more than the ordinary fowls for producing eggs and dressing for market.

On Wednesday evening David Taggart, of Northumberland, Pa., delivered an address before the Society, in which he eulogized the genus *gallus* in classic phrase,—spoke of some of the peculiarities and excellencies of the various breeds of fowls, and maintained that the Cochin Chinas, Brahma Pootras, &c., were all derived from the Shanghais, and only differed in color and other unessential particulars which were determined by breeding with care. The address was interspersed with considerable humor, and a deal of talk not dignified enough to print.

POULTRY.

The following award of premiums was made:

GALLINACEOUS FOWLS.

Best and largest variety of pure bred fowls, bred by the exhibitor, D. P. Newell, Rochester, a Silver Cup valued at $25. Second do., J. W. Platt, Rhinebeck, $10.—Best and largest variety of pure bred fowls, owned by exhibitor, W. H Southwick, New Baltimore, a Silver Cup valued at $25. Second do., D. S. Heffron, Utica, $10.

ASIATIC FOWLS.

Best variety of Asiatic Fowls, of whatever sub-variety, J. P. Childs, Rhode Island, $10.

Shanghais—Best pair or trio, Red or Buff, Jno. McGowan, Philadelphia, $5.—Second do., A. A. Hudson, Syracuse, $3.—Best pair or trio of Black, J. W. Herring, Marcellus, $5.—Second do., M. H Smith, Skaneateles, $3.—Best pair or trio of White, A. A. Hudson, Syracuse, $5.—Second do., George Anderson, Albany, $3.—Best pair or trio of Dominique colored, D. P. Newell, Rochester, $5.—Second do., J. E. M. Van Alstyne, Greenbush, $3.

Cochin China—Best pair or trio, W. H. Southwick, New Baltimore, $5. Second do., George Anderson, Albany, $3.

Brahma Pootra—Best pair or trio, D. P. Newell, Rochester, $5. Second., Wright, Gilmore & Co., Utica, $3.

Chittagong—Best pair or trio, D. Craw, Conn., $5. Second do., C. Bonticue, Lansingburgh, $3.

White Calcutta—Second best pair or trio, D. S. Heffron, Utica, $3.

Black Java—Best pair or trio, J. W. Platt, Rhinebeck, $5. Second do., W. H. Southwick, New Baltimore, $3.

Hong Kong—Best pair or trio, T. B. Miner, Clinton, Oneida county, $5. Second do., D. S. Heffron, Utica, $3.

OTHER FOWLS.

Black Spanish—Best pair or trio, James Kellen, Germantown, Pa., $5. Second do., J. P. Childs, Rhode Island, $3. Third do., D. S. Heffron, Utica, $2.

Dorking—Best trio of white, W. H. Southwick, New Baltimore, $4. Second do., of Grey or Speckled, J. M. Sherwood, Auburn, $2.

Gamburghs Best trio of Spangled Hamburghs. D. St. George, York Mills, Oneida county, $3.

Game—Best pair or trio of Sumatra, T. B. Miner, Clinton, Oneida county, $5. Do of Earl Derby, J. W. Platt, Rhinebeck, $5. American Game, second best, C. E. Platt, Albany, $3. Earl Derby Cock, W. H. Southwick, New Baltimore, (discretionary,) $1.

Polish—Best trio, White or Black, W. H. Southwick, New Baltimore, $3—Bsst pair of Silver Spangled, E. E. Platt, Albany, $3—Second do, C. W. Godard, Albany, $2.

Bantams—Best trio Gold Laced Seabright, I. P. Childs, Rhode Island, $5—Second do, W. Walsh, Bethlehem, $3—Best trio of Java, E. E. Platt, Albany, $3—Second do, African, D. S. Heffron, Utica, $2.

GEESE.

Bremen—Best pair, W. H. Southwick, New Baltimore, $5—Second do, C. W. Godard, Albany, $3

African—Best pair, C. W. Godard, Albany, $5—Second do, R. C. McCormick, Long Island, $3.

Wild—Best pair, E. M. Van Alstyne, Greenbush, $5—Second do, W. H. Southwick, New Baltimore, $3.

PIGEONS.

Best and largest variety owned by exhibitor, C. Bonticue, Lansingburgh, $5 —Best pair of any distinct variety, W. H. Southwick, New Baltimore, $2.

RABBITS.

Lop Eared—Second best pair, S. V. C. Van Rensselaer, Claverack, $2.

RAT TERRIER DOGS.

Pair White Scotch Terrier, John Grieves, New-York, $2. One Black and Tan Terrier, J. M. Lovett, Albany, $1.

TURKEYS.

Wild—Best pair, E. E. Platt, Albany, $5.

Domestic—Best pair, Reynolds & Co., $5. Second do., T. W. Ludlow, Yonkers, $3.

GUINEA FOWLS.

Best pair, W. H. Southwick, New Baltimore, $3. Second do., E. E. Platt, $2.

PEA FOWLS.

Best pair, W. H. Southwick, New Baltimore, $3. Second do., C. W. Godard, Albany, $2.

DUCKS.

Muscovy—Best pair J. W. Platt, Rhinebeck, $5. Second do., D. P. Newell, Rochester, $3.

Aylesbury—Best pair, W. H. Southwick, New Baltimore, $5. Second do., R. C. McCormick, J., Long Island, $3.

Top Knot—Best pair, D. S. Heffron, Utica, $5. Second do., D. P. Newell, Rochester, $3.

Notwithstanding the unfavorable state of the weather, it is understood that the receipts will more than pay premiums and expenses.

On Thursday a meeting of the society was held, and several important additions made to the by-laws and regulations.

The following gentlemen were elected officers for the ensuing year:

President—D. S. Heffron, Utica.

Vice-Presidents—Francis Rotch, Butternutts; M. Vassar, Poughkeepsie; Lewis F. Allen, Black Rock.

Cor. Secretary—R. C. McCormick, Jr., Woodhaven, L. I.

Rec. Secretary and Treasurer—R. U. Sherman, Utica.

Managers—Samuel T. Tabor, Dutchess; Thos. W. Ludlow, Jr., Yonkers; Samuel Thorne, New-York city; C. W. Godard, Albany; A. P. Hammond, Westport, Essex co.; W. H. Southwick, New-Baltimore; Samuel S. Beman, Hampton, Washington co.; George St. George, York Mills, Oneida co.; Thomas Gould, Cayuga co.; A. A. Hudson, Syracuse; R. H. Van Rensselaer, Otsego co.; F. W. Collins, Ontario co.; Isaac E. Haviland, L. I.; Abner Baker, Rochester; Wm. Walsh, Bethlehem, Albany co.; John H. Cole, Columbia co.; D. W. C. Van Slyck, Wayne co.; J. Wyman Jones, Utica; N. S. Smith, Buffalo; Curtis Moses, Syracuse.

* * *

Poultry Sale.—Daniel Warren, of Newark, Kendall Co., Ill., purchased twenty Shanghai fowls of Geo. Anderson, of this city, last week, for which, we are informed, he paid $80.

Care of Cows, Profits, &c.

Messrs. Editors—If I could see your subscriber who wishes to know how to keep cows from lying down in their manure when in the stable, I would tell him how I do it.

The place where I keep my cow was not designed for a stable, but I find the size is just what is needed. It is 12 feet by 7. I do not tie up my cow, nor would I if I had any number that I milked.

In the back end of the stable I put a division, by placing a plank 8 inches wide, on the edge. Four feet from the end in this division, I put litter. This is her bed, 4 by 7, but which is about right for common sized cows. The rest of the stable I keep clean. When the cow stands at the manger, her hind feet come nearly back to her bed, but not so near as to drop anything on to it.

I have a large window in the back, which I keep open during the day, and she usually stands with her head out as far as she can reach, with her fore feet in her bed and her hind ones near the same place that they are when she stands at her manger. These two positions she occupies the most of the time, and in neither case does she drop anything on to her bed. I do not clear the litter every day, but let it remain as high as the edge of the plank, and occasionally throw it out.

In no instance have I found a speck upon her this winter, and her hair is as clean as any time in the summer.

One word about Currying.—I cannot say how much good it does an animal, but if my cow sees me with the card in my hand, I cant get away from her till I give her a good scratching. She will hold up her feet to have them scratched, and I think if farmers would begin with their young animals, they would not be troubled with stubborn cows or oxen.

The inquiry is often made, is it profitable for a man to keep a cow for his own use?

I have sometimes kept a cow and sometimes have been without. My bill for milk and butter has not varied much from 60 to 65 dollars.

My cow eats 2½ tons of hay weighed in haying at 10.00 per ton,	$25,00
Pasturing,	8,00
And supposing we throw in	7,00
Making	$40,00

Then there is as much milk as you wish, and a little for your neighbor, to be returned when your cow is dry; and for the trouble you may strike the balance with the manure heap and pig. W. A. Ela. *Munson, Mass., Jan. 11th*, 1854.

Trench Plowing for Young Trees.

Would the Michigan sod and sub-soil plow be an improvement on the common plow for preparing nursery ground for young trees. J. W. G. *Balls Pond, Ct.*

We have found it the best implement which has come to our knowledge for deepening the soil to a depth of one foot, when preparing for a nursery of young trees, as it runs deeper than the ordinary plow can be made to work.

Notes for the Month.

AN IMPOSTOR.

Within the past month we have received letters from about a dozen different places in Ohio, making inquiries about a person who had been soliciting subscribers in their vicinity for "The Cultivator." A gentleman writes us from Springvale, as follows:

> I write for information concerning a man, purporting to be your agent. He was in our neighborhood about the first of Dec. last, and must have obtained, in a short distance around Chillicothe, nearly forty subscribers, a majority of whom paid him the subscription price, $1,00.
>
> No papers having been recieved, as yet, I deem it prudent to inquire whether you authorized such a man to act as agent here. He was a man of middle age, rather short and heavy set—full-faced—had sandy hair, I think, and called himself McGiffin. He traveled on foot, as far as I heard from him.

Another gentleman at Washington, Fayette Co., says:

> Some time in November last a man came into this neighborhood, representing himself to be an authorized agent for your paper, and got quite a number of subscribers, stating that we would receive two copies per month, one of reading matter and one of plates. We have received no paper and have heard nothing from the man, and now address you to know what is wrong. He was about fifty years of age, heavy set, rather pleasing address, and quite gentlemanly. We paid one dollar each for the paper, and would be glad to hear from you whether we have been hoaxed, or whether the papers have been sent and went the wrong way. The man had sample copies of your paper bound, and also a copy of plates.

This McGiffin, or whoever he is, is an arrant impostor. It will be seen that he not only charged double the subscription price, but in some instances promised that the Nos. should be accompained by a book of plates. We shall be greatly obliged to the editors in Ohio, with whom we exchange, if they will caution the public against him.

◆

Not yet too Late!—As the pages of The Cultivator are stereotyped, we are enabled to supply all new subscribers with the back Nos. at whatever time of the year their names are sent in; and we would remind all those who are disposed to aid in extending its circulation that there is room for more names on our books. Now is the time to procure subscribers before spring work commences, and all who wish their neighbors to be benefited by reading The Cultivator, are invited to act as Agents, and to send forward such names as they may procure at any and all times during the year.

Remember, eight copies for $3. Those who have sent $3, can add any number to their club at 37½ cents.

"Albany Agricultural Works."—The large establishment known under this title, which has been carried on by the firm of Emery & Co., for some years past, has been sold to Mr. R. H. Pease, of this city, by whom the entire business will hereafter be conducted. He will be assisted in the manufacturing department by Wm. B. Emery, and in his general business by Henry D. Emery, both of whom have been connected with the business since its first establishment here. The Emerys have labored with most untiring energy to build up an establishment which is alike creditable to the city and the state, and now that they have been compelled by circumstances entirely beyond their control, to retire from it, we are glad to know that it has gone into the possession of a gentleman whose character, business energy, and capital, will enable him to prosecute the business with satisfaction to the public, and, we trust, profit to himself.

☞ Our correspondent "F. C. L." who writes us from *Rahway, N. J.*, will find a letter, addressed as above, at the Rahway post office, to which we should be glad to receive an early answer.

South Down Sheep.—We are gratified to learn that Jonathan Thorne, Esq., has employed a competent artist to make models of several of the fine animals which he imported the last season. There is no way in which the superiority of such animals can be better exhibited to the multitudes who never have the opportunity of seeing them, and we hope ere long to see in the museum of our State Ag. Society, a collection of models of all the fine breeds of domestic animals. Mr. Thorne will please accept our thanks for a model of one of his beautiful South Down ewes. It can be seen at our office.

W. H. S., Rochester, Mich., inquires "about the Samson stock of horses." We do not know to what stock he refers, unless to the descendants of the valuable pair of cart horses imported by Messrs. Corning and Sotham in 1840, the stallion being known by the name of "Samson." He was an animal of great strength and of more activity than is generally ascribed to this breed. He was taken west many years since, and we have heard little of his stock.

Illinois.—Extract of a letter from a subscriber at Ottawa, dated Jan. 27:—"Very severe cold. Saturday morning, 20th inst., 10° below, and on Monday morning, 16° below zero, at this place; otherwise very pleasant. Corn coming into town in large quantities, and of average good quality; 38 cts. yesterday. Corn pays moderately well at 25 cts. At one period last summer, corn went up to 60 cts., for old. Our farmers are buying excellent lands, and if able to make first payment down, (generally one-fourth,) the remaining three payments are made from crops raised off same lands, besides maintaining the family heartily, but not daintily perhaps. Lands within five miles of town, about $5—twenty miles from town, northwardly, same price; southwardly, ten to twenty miles, three to five dollars; eastwardly and westwardly, (being on the line of canal, railroad and river,) varying from fifteen to fifty dollars."

Seeds of the Hawthorn.—F. McKay, of Nova Scotia, wishes to know a method of inducing the seeds of the English Hawthorn to grow the first year. We do not know of any means to accomplish this purpose. The author of the article "Fences," in Morton's Cyclopœdia, who has planted annually for 20 years from 10 to 30 bushels of the seed, knows of no better way to treat them, than to gather them in autumn when fully ripe—lay them in a thin heap to rot, and prevent heating—afterwards with one-third their bulk of sand or mould, in a larger heap—covered with soil, like a potato heap, 3 to 6 inches thick. Remaining thus through summer, they are sown late in autumn. Autumn sowing he thinks decidedly best, but a few prefer spring, who fear cold weather, mice, &c. The Hawthorn generally fails as a hedge in the United States, but may succeed possibly, in Nova Scotia.

Influence of Salt on the Cherry.—F. McKay, of Nova Scotia, writes us, "We have here the English Blackheart Cherry, which bears abundantly if planted near the salt water—if not, it is not worth a straw."

Fine Apples.—We tender our thanks to P. H. Warren, Esq., of Mohawk, Herkimer county, for half a barrel of very fine Apples, including the Baldwin, Bellflower, Middle apple, &c. The Middle apple originated in Herkimer county, and is one of the best apples at this season. Mr. Warren says "that with us, as a desert apple, it stands at the top; but is not profitable to grow for market, unless it can be improved by cultivation, as with us it is a shy bearer, and has too large a proportion of unfair fruit." It is well worthy of trial in other localities, where it may prove more productive.

The Next Ohio State Fair.—The State Board of Agriculture lately held a meeting in Columbus, and resolved to hold the next State Fair at Newark, Licking Co., on the 17th, 18th, 19th, and 20th of September, 1854.

Addison Co. (Vt.) Ag. Society.—The Eleventh Annual Meeting was held at Middlebury, Jan. 18, at which the premiums on Field Crops were awarded The first premium on *Winter Wheat* was taken by Alvin Squier, of New-Haven, for 53 bushels and 44 lbs. per acre; the 2d by Oliver Smith, of New-Haven, for 33½ bushels, and the 3d by Walter Barton, for 29 bushels. For *Spring Wheat*, Allen Smith, of Addison, received the first premium, for 23 bushels per acre. The first, second and third premiums on *Corn* were awarded for 122 bushels and 19 lbs.; 94½ bushels; and 91½ bushels. Allen Smith, of Addison, received the first premium on potatoes, having raised 105 bushels on ¼ acre. The yield of all the other premium crops was about in the same proportion, and speaks well for the farming in Addison county.

Onondaga.—The Agricultural Society at its annual meeting on the 17th, elected the following officers for the ensuing year:

President—Jason C. Woodruff.
Vice-Presidents—Edmond D. Cobb and Luther Baker.
Recording Secretary—Henry D. Didama.
Corresponding Secretary—Davis Cassit.
Treasurer—James S. Davis.

Clinton Co. Ag. Society.—At the annual meeting held at Plattsburgh, Jan. 24, the following officers were elected for this year:

President—John W. Bailey, Plattsburgh.
Vice-Presidents—John W. Hubbell, Chazy; Isaac Smith, Plattsburgh; Calvin Everest, Peru; Silas M. Taylor, Schuyler Falls; Abram P. Allen, Saranac; A. J. Moses, Champlain; Z. G. Whitney, Mooers; D. K. Lapham, Peru; Thomas Crook, Beekmantown; John Nichols, Plattsburgh.
Secretary—John L. Stetson, Plattsburgh.
Treasurer—Zephaniah C. Platt, Plattsburgh.

Credentials of the Country Gentleman.

As evidence that the purposes of the Country Gentleman are carried out in its weekly issues, we make a few extracts from the correspondence we are in receipt of. Whether regarded as an Agricultural and Horticultural journal, as a Companion for the Fireside, or as a Record of the Times, it is admitted by those every way competent to judge, to be unexcelled by any similar publication in the country.

A gentleman in Massachusetts, distinguished for his scientific attainments and his practical skill as an agriculturist, writes us:

> "I cannot close without expressing the gratification I feel in reading the Country Gentleman from week to week. If the hearty approbation of a single reader is of any worth to you, you have mine *most heartily*, I assure you.
>
> "The Agricultural Department is just what the farmers of our country want—a candid, cautious, wise exhibition of *well ascertained truths*, bearing upon the interests of that most valuable and all-important class of every community.
>
> "Whether your Horticultural Department contains all that the professional gardener would require is more than I know. That it contains such matter, and just about as much, as the fathers, mothers, sons and daughters of our farm-houses ought to have weekly spread before them, I am quite sure. You are right to encourage sober, economical, good taste in the arrangements of farm-houses and their surroundings. God has made the world *beautiful* as well as *productive*; and the dwellers under his broad heavens should be often told how, without an extravagant expense, they may add *beauty* to productiveness on their premises.
>
> "Of the Fireside Department, what shall I say? I know not who has charge of it; but whoever he is, he does up his work admirably. I read gentlemen's magazines and ladies' magazines; works of fact and of fiction; of good taste and of no taste; grave, gay and sober; but I find nothing that is "got up" in better style, or that, by the intrinsic worth of its matter, better deserves a place on the center table than the Fireside Department of the Country Gentleman. It was a happy thought thus to unite so much that is tasteful, intellectually pleasing and morally elevating, with the other and more every-day matter of fact, practical departments of a weekly visitant to so many of the excellent families, scattered throughout our land."

Another gentleman who has traveled largely among the farmers in different parts of the country writes:

> "I hear but one opinion expressed with regard to the Country Gentleman, namely, that it stands first and foremost among papers of its class, and that it deserves an unlimited circulation among the farms and homes of the land. It is fully up to the progressive spirit of the times without being ultra in its tone; it is cautious and conservative without being one-sided and empirical; its fireside department is instructive without being dull and prosy, lively without being low-lived, humorous without being vulgar. The Record of the Times is the most complete digest of current events that I know of."

Another correspondent, in sending his subscription, says:

> "I cannot refrain from expressing to you the great satifaction I have had in reading the Country Gentleman. I consider it the most valuable family paper for the Farmer that I know of, and I cannot doubt but your list of subscribers will steadily, if not rapidly increase. If I can influence any of my neighbors to subscribe to it, I consider I am doing them and their friends a material service."

From a gentleman in Western New-York:

> "I consider the Country Gentleman the best paper for our farmers I have yet seen, and wish it might be in the family of every tiller of the soil in the land."

A subscriber at Pittsburgh, (Pa.) says

> "I read the Country Gentleman with much pleasure and profit; and I think there is but one sentiment among its numerous readers, and that is, that it is the leading agricultural periodical of our country, useful and practical."

The Country Gentleman is published weekly, at $2 a year. Address Luther Tucker, Albany, N. Y.

☞Specimen numbers sent to all desiring them.

CORN SHELLERS.—"Which is the best and cheapest corn sheller for hand use?" This question is by a correspondent in Iowa, and by another in this state. We know of none better than the one known as the "Clinton Corn Sheller," and which can be had at all agricultural warehouses, for $9 or $10.

S. F. C., Freindsville, Pa.—We have an article waiting insertion, which will answer your inquiries fully.

BROOKFIELD TOWN AG. SOCIETY.—The Brookfield (Madison co.) Agricultural Society held its fourth annual meeting, Jan. 10, 1854, at which time the following officers were elected, viz:

President—STEPHEN HOXIE.
Vice-Presidents—Oliver B. Hinkley, David P. Curtis.
Secretary—L. A. Saunders.
Treasurer—Luke Hoxie.
Executive Committee—Lewis D. Maxson, Horace Babcock, S. H. Burdick, H. Hill, Silas Whitford, Dr. A. L. Saunders, P. Greene, A. Babcock and O. P. Babcock.

FUNDS.

Cash on hand last year and interest,	$94 91
Receipts of cash for current year,	351 85
50 vols. Trans. American Institute, donated by State Society, estimated,	50 00
	$496 76
Expenses of Fair and Premiums, including 33 vols. of Trans. American Institute,	213 84
	$282 92

The distribution of some of the best agricultural papers as premiums by the Society, seems to do much for the benefit of the town and for sustaining the organization. A. L. SAUNDERS, *Ex. Sec'y.*

Trees at Low Prices.

TO Dealers and other Wholesale Purchasers. The subscribers are obliged, by demands upon their lands for building purposes, to remove a large portion of their stock of trees. They therefore offer many varieties, both of fruit and ornamental trees and shrubs, at very greatly reduced prices. For particulars, address PARSONS & CO.,
March 1—m&wform Flushing, near New-York.

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.
March 1—mtf GEO. H. BARR & Co.

Superphosphate.

NO expense has been spared in the combination of this most fertilizing manure, which contains the natural properties of plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. It is put up in bags, at $40 per ton, of 2.000 lbs., cash.

Office of the New-York Superphosphate Manufacturing Company, No. 159 West-street, New-York.
March 1—m3t VICTOR R. KNOWLES. Agent.

Large Dwarf Pears.

THE subscriber offers for sale his collection of Dwarf Pears, to which allusion is made in Barry's Fruit Garden. They consist of Glout Morceau and Vicar of Winkfield, eight years old, Louise Bonne and Winter Nelis, five years old, Beurre d'Aremberg, Columbia and Lawrence, four years old. The Vicar of Winkfield bore in 1852 more than a peck of large Pears to each tree, and the ensuing will be the bearing year. The others have all borne more or less fruit. They will be sold for 75 cents to $2,00, according to size.

Also, bearing trees of over 200 varieties of Dwarf Pears, the selection of ten years' importations, and seven to ten years old.

The above are all very fine trees, and are sold only because the land is wanted for building purposes.

S. B. PARSONS,
March 1—m&wform Flushing, near New-York.

Thorp, Smith, Hanchett & Co.,

PROPRIETORS OF THE SYRACUSE NURSERIES,

CULTIVATORS of, and Dealers in, all kinds of Nursery Productions, offer for the Spring Sales a very large stock of *Apple, Pear, Cherry and Peach Trees, both Standards and Dwarfs*, as well as a good supply of Plum, Quince, Apricot and Nectarine Trees, and all the best and most popular sorts of the smaller fruits; Currants, Raspberries, Strawberries and Gooseberries.

Their stock of Raspberries includes Fastolff, Franconia, Knevet's Giant, Large Monthly, the Antwerps, and Dr. Brinckle's Seedlings; of Currants all of the leading kinds; and of Gooseberries, 3,000 fine plants of the best Lancashire sorts.

Grapes—Native, one, two, and three years old, in large quantities; Foreign—forty best sorts.

Ornamental Trees and Shrubbery, in great variety.

Roses—One of the best and rarest collections in the country; including, of course, Mr. Mathews' matchless Seedling, the Augusta—of the most luxuriant growth and foliage, profusion of bloom, splendor of flower, and of the most exquisite perfume. The price, as will be seen by our Catalogue, is very much reduced.

Dahlias, Phloxes, Bulbous Roots, Green-house and Bedding Plants, including all the novelties of the season. Hedge Plants, Rhubarb and Asparagus in large quantities.

Evergreens of choice varieties, as well as many thousands of Balsam, Norway, European Silver and Scotch firs, Austrian Pines, Chinese and American Arbor Vitæs, &c., all in fine condition.

☞Among their stock of Pear Trees, they have in large proportion, the Virgalieu, Onondaga, and Oswego Beurre, both Dwarf and Standard. No more desirable kinds for early bearing, productiveness and great excellence, can be cultivated extensively for market. They have also several hundreds of Extra Sized Fruit trees of the finest growth and form, cultivated and trained into bearing for themselves, which the necessity of changing their grounds to those much more extended requires them in part to remove. These trees consist of Cherry, Plum, Standard and Dwarf Pears. They have furnished the greater portion of the specimen fruits exhibited by the proprietors at the State Fairs for two years past, and are offered at from $1 to $3 each.

The products of their nurseries having a reputation second to none in the country, those now favoring them with their orders may rely upon that reputation being sustained. They annex a few commendations selected from many of a like nature, both as to the quality of their trees, and that other essential, the excellency of their packing, to which they invite attention.

"The trees were all packed well, and are very fine—not one article but I am perfectly satisfied with it." From Leyden, Cook Co., Illinois.

"The trees were packed well and came to hand in fine order." South Bend, Indiana.

"The trees, though long delayed on the way, arrived in good condition, and opened well. I must say they were evidently taken up and packed with much more than ordinary care." Delaware, Ohio.

"And now about the trees. If you had *trimmed* them [a novel complaint] they would have been the finest lot of trees I have ever seen from your State. I never saw finer roots." From Springfield, Ohio. [The trees here spoken of, let it be remembered, were sent out from the Syracuse Nurseries as their *second class* trees.]

☞"The trees, to appearance, [having been delayed on the way] were in good order, and better trees than I have ever seen west of the Lakes." Roscoe, Ill.

☞The proprietors have also been favored by a customer with the following certificate, made after an examination of a large lot of their trees:—

"We, the undersigned, do hereby certify, that we have personally examined the lot of fruit trees which Mr. ——— now has in the village of Marshall, and we do not hesitate to say, that they are the best lot of Fruit Trees, to all appearance, that has ever been offered for sale in this county." Dec. 14, 1853, [Signed,] ABNER PRATT, Circuit Judge, Supreme Court; ERASTUS HUSSEY, Co. Clerk; H. A. NOYES, Judge of Probate; J. H. MONTGOMERY, M. D.; D. DARWIN HUGHES; T. A. RANDALL; J. A. VAN HORN; JAMES A. WAY.

☞*Catalogues furnished gratis to all post-paid applications, enclosing a letter stamp to pre-pay the same.*

Syracuse, N. Y., Feb'y, 1854—w2tm1t

8000 BUSHELS OF BONE DUST, SUPERIOR TO anything in market, for sale either by the bushel or barrel. Also, 500 loads of rich Compost Manure.

THOMAS COULSON,
Jan. 17—w1y 590 Bowery, Albany, N. Y

New and Improved Plows,

INCLUDING the Deep Tiller, Flat Furrow, Self Sharpener, Centre Draft, Side Hill, Subsoil, Double Mold, Potato, and Cultivator Plow.

Harrows, Rollers, Seed Sowers, Cultivators and a large assortment of all other Agricultural Implements.

R. L. ALLEN,
Feb. 23—m3tweowtf 189 & 191 Water-St. New-York.

SAMUEL MOULSON,

At the Old Rochester Nursery,

Office, No. 36 Front Street, Rochester, N. Y.,

IS prepared to furnish inventories to post paid applicants of the present extensive stock of Nursery Items, consisting in part of

10,000 very fine Northern Spy Apple Trees from 7 to 8 feet high, which will be offered by the 1000 at low prices.
90,000 Dwarf and Standard Pears.
20,000 Apple Trees in variety.
20,000 Peach Trees in variety.
15,000 Plums, Cherry and Apricot.
20,000 Osage Orange of different ages. And over
100,000 Hardy Evergreens, and a fine selection of Weeping Deciduous Trees, Ornamental Shrubs, together with such novelties as may be classed strictly hardy, and a large collection of Dahlias, Tulips and other Bulbous Roots.

The Amateur wishing prime fruits of well established repute, or the Agriculturist, needing fine cropping thoroughly tested varieties, may rely upon the most careful execution of their orders.

The Ornamental Items are entirely grown in the Nursery, consequently none of the heavy losses are sustained that usually occur to recently imported subjects.

The Evergreens are very robust and abmirably furnished to the surface of the ground, none presenting the naked stems usual to imported plants.

Dealers are invited to give a call before making their purchases. March 1—m1t

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Valuable Farm for Sale.

THE FARM KNOWN AS HILLSIDE, in the Town of Macedon, county of Wayne, N. Y., situated two miles from Macedon village (through which the Syracuse and Rochester Railway passes,) and on the Plank road leading to Victor, is offered for sale.

It consists of *ninety-one* acres, eighteen of which are in woodland, forty of intervale of the finest quality, and the remainder of superior upland.

The supply of water is unusually good.

The Orchard is mostly of young trees, and the selection is the result of extensive acquaintance with fruits for many years.

The Apple Orchard of some Two Hundred trees comprises most of the sterling old varieties, and such new ones as were thought worthy of their company.

The Peach Orchard has some Three Hundred trees mostly in bearing, with the fullest succession of fruit possible.

The Apricot Orchard of One Hundred trees, has eighty trees of the "Golden," and the remainder of well known kinds.

The Pear Orchard has upward of One Hundred standards, forty of which are in bearing, and about Two Hundred Dwarfs, mainly of the celebrated Duchess Angouleme.

The Cherry Orchard is not surpassed by any in the State, having about sixty trees, and upwards of thirty varieties.

There is a Quince Orchard of about seventy trees, and a choice selection of Plums, Nectarines, Thin Shelled Almonds, &c., &c. There are two acres of Strawberries, one-fourth of an acre of Rhubarb, Gooseberries, Grapes, Currants, Raspberries, Asparagus, &c., &c.

The buildings consist of a new and very superior dwelling, built with every regard to permanence, warmth, ventilation and convenience. Parlor and dining room, each fourteen by eighteen feet, a library and five large bed rooms, with three smaller ones—a bath room, kitchen, wash-house, dairy, pantries, &c., with a deep Verandah on each front. Nine rooms are thoroughly warmed by a furnace in the basement.

The large Lawn is planted with a variety of rare and desirable ornamental trees and shrubs.

The Farm and Horse barns are nearly new, and two laborer's cottages are conveniently situated on the property.

Whether reference be had to beauty of situation, fertility of soil, proximity to market, or to an accumulation of those comforts which time and labor alone produce, this will be found a rare opportunity for profitable investment.

The terms of sale can be known by applying to J. D. Husbands, Rochester; Asa B. Smith, Macedon, or to the subscriber. WILLIAM R. SMITH.

Wilmington, Del., 2d Month, 1854. Feb. 23—w2tm2t

Kentish's Prepared or Artificial Guano.

Twenty Dollars per Ton.

Potato Rot.—I have used "Kentish's Prepared Guano" this season on potatoes. My crop was large and all sound. Where I did not use it, the potatoes were all rotten and worthless. My neighbors also, who have not used this fertilizer, have not raised a saleable potatoe this year. I consider it a preventive of Rot. G. PREAUT.

Westchester Co., N Y., Sept. 29, 1850.

Extract of a Letter from E. B. Addison.

Alexandria Co., Va., April 22, 1851.

Dr. John H. Bayne, President of Prince George's Co. Agricultural Society, Maryland, has desired me to inform you that last spring he used African Guano, Poudrette, Peruvian Guano, and your prepared Guano on Potatos. The first two were distanced, but the result from the Peruvian and yours, was about equal. He pronounces your Prepared Guano to be a very excellent article, and esteems it highly.

Richmond Co., N. Y., July 27, 1849.

"I have made use of Kentish's Prepared Guano on potatos, cabbages, cauliflowers, corn and grapes. I found the result much more satisfactory and the produce much larger than where I used imported Guano or any other kind of manure. EDWARD JENNINGS, Gardener."

It is equally fertilizing on all crops. See the numerous certificates on this subject in the printed circular to be obtained at KENTISH & CO'S Depot,
March 1—m3t No. 159 West-st., City of New-York.

POTATO ROT!

A remedy by wise importation and reproduction!

Valuable Potatoes for Sale.

THE subscriber offers the following valuable varieties of Potatoes for sale. The N. Y. State Agricultural Society have generously encouraged their importation and culture.

1st. *The Rough Purple Chili.*—This was imported at a great expense from South America, in 1851, and was the only sort out of eight adapted to our climate. For *hardiness, yield, and quality for the table*, it has no equal. Seventy-five small parcels of it were widely spread, in 1853, over twelve Northern States. From more than one-third of them, embracing nine States, reports have been received. These reports, notwithstanding the unfavorableness of the season, usually show a yield varying from twenty to sixty pounds, from one pound planted. But *two* cases of disease have been reported: one from Mass., and one from N. Y., both in circumstances of very unfavorable culture. The adaptation of this variety to the varying soil and climate of our country is such as to render it superior to any now cultivated. Price, $8 per bushel.

2d. *Seedlings of the Rough Purple Chili.*—These were derived from the seed-ball of the preceding, in 1852. They present a considerable number of varieties. They have been chosen by three successive selections, from nearly eight hundred varieties, so as to secure hardiness, the best yield, and fine flesh. In season of maturity, many of them, and in color and shape, the most of them exceed the parent. They are now offered to the public, after a most laborious and costly cultivation, in the fullest confidence that they will make an addition of valuable sorts to those now in use, such as have never before been made. Connected with them are some other sorts of the same age, and equally valuable, and similarly selected from three other families. Many of these seedlings were widely tested the last year, in connection with the Rough Purple Chilis. ☞ Those varieties of these seedlings which are *too late* for the Northern States, have been expressly selected for the South. Price, $8 per bushel.

☞ Each parcel ordered will be safely packed and directed to the purchaser by railroad or express, as directed, and at the expense and risk of the purchaser. No package failed last year to reach its destination.

☞ Dealers will be allowed a discount of 25 per cent.

☞ Purchasers who take parcels from my house and pack for themselves, will also be allowed 25 per cent. discount.

☞ All orders answered *for Cash* only.

Residence, near the State Lunatic Asylum.

CHAUNCEY E. GOODRICH.

Utica, N. Y., Feb. 10, 1854.

REFERENCES.

The following persons are acquaintad with these Potatoes, having all cultivated them the last year: D. A. Bulkley, Williamstown, Mass.; A. S. Mitchell, Farmington, Conn.; A. Bradley, Whitestown: H. H. Eastman, Marshall; Dr. H. P. Hays, Wyoming; J. W. Briggs, West Macedon; M. P. Covert, Schenectady; Samuel Buckingham. Poughkeepsie, N. Y.; R. L. Colt, Patterson, N. J.; R. C. Walker, Elizabeth; James S. Negley and John Fleming, Pittsburgh, Pa.; J. C. Holmes, Detroit, Michigan.; B. Murray and H. L. Brush, Ottawa; Rev. G. W. Gale. Galesburgh. Ill.; D. D. Cathcart, Bristol, Ind.; A. C. Isham, Madison, Wis.

Feb. 23—w3tm1t

Highland Nurseries, Newburgh, N. Y.

A. SAUL & CO., in inviting the attention of their patrons and the public in general, to their very extensive collection of FRUIT & ORNAMENTAL TREES, SHRUBS, &c., &c., would respectfully inform them that the stock which they offer for sale the coming spring, is unusually fine, both as regards quality of trees and variety of kinds, &c.

The soil and climate of the Hudson Highlands, have rendered proverbial the success of the trees sent from here, to all parts of the Union, and the accuracy and precision so indispensable in the propagation of fruit trees, for which this establishment has long been celebrated, render errors in nomenclature of rare occurrence.

They have propagated in large quantities, all the leading standard varieties, which are proved best adapted for general cultivation, especially those recommended by the American Pomological Society; as well as all novelties both of native and foreign origin.

To particularize, within the limits of an advertisement, would be impossible; they refer to their general catalogue, a copy of which will be sent to all *pre-paid* applicants, on inclosing a Post Office Stamp.

The following comprises a portion of their stock, and are all of fine growth, viz:

PEARS—in 400 varieties, both standards on their own stock, for orchard culture; and on Quince for dwarfs, Pyramids and Quenouille, for garden culture.

APPLES—in over 300 varieties, both standards, and dwarfs; also, Cherries, both standards and dwarfs; Plum, Apricot, Peach, Nectarine, and Quince trees in every variety.

GRAPE VINES—(both native and foreign for vineries,) Gooseberries, (50 best Lancashire varieties,) Currants, Raspberry and Strawberry plants of all leading and known kinds, together with Seakale plants, Asparagus and Rhubarb roots, &c., &c.

ORNAMENTAL TREES, Shrubs and Vines, both deciduous and evergreen, suitable for street and lawn planting, embracing all the new and rare Conifers, Weeping trees, and Shrubs of recent introduction.

ROSES—in every variety, including Hybrid Perpetual, Hybrid Bourbon, Hybrid China and Hybrid Damask; Prairie, Boursalt, Ayrshire, and other climbing and garden varieties, as well as the more tender; Tea, China, Bengal, Bourbon, and Noisette kinds.

HERBACEOUS PLANTS.—A large collection of Pæonias, Phloxes, Campanula, Penstemon, Œnothera, &c., &c.

DAHLIAS and bedding plants, for the parterre and flower garden, in large quantities and variety.

HEDGE PLANTS.—500,000 Osage Orange plants of two years' growth, in three sizes, at $10, $8 and $6 per 1,000. Also, Buckthorn plants, two years' growth, at $8 per 1,000. Arbor vitæ for screens, &c., &c.

Dealers and *Planters* of trees, on a large scale, will be dealt with on the most liberal terms.

Newburgh, Feb. 20, 1854.—Mar. 1—m2t

HEDGES! HEDGES!—LIVE FENCES,

From the Maclura or Osage Orange.

H. W. PITKIN'S SEEDS AND PLANTS.

I WOULD call the attention of those who may desire to enclose their grounds with this desirable hedge, to my Osage Orange Seed, which has, the past season as heretofore, been gathered and preserved under my immediate care and direction, and can therefore be warranted fresh and genuine.

It is well known that a large portion of the seed usually purchased in market, fails to germinate. This is owing to the vital injury received in process of extraction from the apple, and the careless, slovenly manner of putting up and transporting.

Also on hand a large number of selected plants. They are so packed as to be transported with safety and little expense.

A descriptive pamphlet, containing full directions for planting seed, setting and rearing hedges, &c., mailed to purchasers. Address H. W. PITKIN, *Manchester, Conn.*

Agents—Hoyt & Co., Water-street, New-York; P. B. Mingle, Philadelphia; John Sears, Jr., Chicago; Byrum Pitkin & Co., Louisville; D. Redmond, Augusta, Ga.

Feb. 23—w4tm2t

Cranberry Vines.

100.000 FINE BEARING PLANTS, of the Bell variety, which are commonly raised in New England. On low ground, with a little care, they bear large crops. They can be forwarded at any time between this and the first of May, to any part of the United States. A circular, with mode of culture, soil, and price, will be forwarded to all who may want information on the subject.

F. TROWBRIDGE,
Feb. 2, 1854—w1tm1t New Haven, Ct.

A Valuable Farm for Sale—Very Cheap,

SITUATED within two hours ride from Milwaukee by Railroad. Said farm is in the town of Summit, Waukesha county, Wisconsin, containing one hundred and sixty acres of choice land, and is well watered, and an abundance of heavy timber is on it. A part of the soil is rich Prairie, the balance a light loam. The locality is remarkably healthy and society good. There are upon said farm a good set of Agricultural Implements and a few choice Durham Cattle, all of which will be sold very cheap for cash.

For a more particular description, inquire of
Feb. 23—w1t THOMAS ALLEN, Chicago, Ill.

Hallenbeck's Mowing Machine.

THE subscriber having perfected and tested his new and improved Mowing Machine, now offers it to the public for the coming season, confident that it will not fail to give perfect satisfaction. It is simple in construction, light of draft, and perfectly free from clogging. They are built at present for me by Deering & Dederick, corner of Bleecker and Franklin streets, Albany, N. Y. A large number will be made, and are offered to the public, warranted to operate well and to give satisfaction. Persons intending to buy mowing machines will find it to their advantage to examine mine before purchasing.

For further particulars, address the subscriber at Albany, N. Y. MARTIN HALLENBECK.

Feb. 2—w&mtf

Fowls and Eggs.

THE subscriber has a very choice selection of Fowls that he will breed from the coming season, of the following varieties:—Royal Cochin China, white, black, buff and brown—Brahma Pootra, or Chittagong, Black Spanish, Bolton Grey or Creole, Gold and Silver Poland. All of the above breeds are pure and very large. Those who want Fowls or or Eggs of any of the above breeds will find fowls at moderate prices, and eggs at $3 per dozen. All orders post paid. Eggs carefully packed to send by express, according to direction. He refers to C. W. Goddard, Esq., and B. B. Kirkland, Esq., Albany. GEORGE ANDERSON,

Feb 9—w2tm1t* 56 Schuyler street, Albany.

Fruit and Ornamental Trees, &c., &c.

THE subscribers have the pleasure of announcing an immense stock of trees, &c., for the spring trade—embracing:

Standard Trees for Orchards.
Dwarf and Pyramidal Trees for Gardens.
Ornamental Trees for Streets, Parks and Pleasure Grounds.
Rare and beautiful Lawn Trees.
New and rare Weeping Trees.
Evergreen Trees, embracing the rarest species of Pines, Firs, Spruces, Yews, Cedars, Junipers, &c.
Hardy Flowering Shrubs.
Roses, of all classes, and embracing the newest and best sorts.
Dahlias, the finest English prize sorts.
Chrysanthemums, including the finest of the new Pompone varieties.
Phloxes and Pæonies, superb collections.
Bedding Plants, a complete assortment.
Hedge Plants.
Box Edging.
Rhubarb, Asparagus, &c., &c.

All orders, whether for large or small quantities, executed with the greatest care, and in strict compliance with the wishes of the purchaser. Packing done in the most secure and skillful manner, so that parcels can be transmitted thousands of miles with safety. Nurserymen and dealers in trees will be supplied on the most liberal terms.

The following Catalogues are sent *gratis and pre-paid* to all who apply and inclose a postage stamp for each.

No. 1. Descrip. Catalogue of Fruits.
No. 2. do. do. Ornamental Trees, &c.
No. 3. do. do. Dahlias, Greenhouse Plants, &c.
No. 4. Wholesale Catalogue.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.

Feb. 1, 1854—m2tw2t

Sherman Morgans for Sale.

TWO of the above Horses (entire), sired by Old Black Hawk from English mares—one a Dark Chestnut, 15 hands high, weight 1,100, six years old—one a Dark Bay or Brown, 15 hands high, weight 1,100, five years old, and every way perfect, well broke to harness, &c.

Address P. T. DAVIS,
Feb. 9—w4t* South Hero, Grand Isle co., Vt.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequaled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine —also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shippping or using on plantation, arm or garden. JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilisers. Jan 1, 1853—m&wtf

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Poudrette.

THE LODI MANUFACTURING CO. offer their Poudrette for sale in lots to suit purchasers, from one barrel up to 4,000 barrels, at their usual rates, viz, $1,50 per barrel for any quantity over seven barrels, delivered on board of vessels in the city of New-York free of cartage or other expense. When 200 to 300 barrels are taken, a deduction will be made from the above price. That this article has stood the test of 14 years' trial, is proof of its efficacy. It is the cheapest and best manure for corn ever produced, and it has the advantage of being useful in small quantities and harmless in large. It is a capital manure for peas, strawberries, &c., &c., and all garden vegetables.

Apply by letter or personally to the Lodi Manufacturing Co., 74 Courtland street, New-York.

Jan. 19—w4m—m4t

Peruvian Guano.

WE are receiving our supply of Peruvian Guano per ships Blanchard, Senator and Gray Feather from the Chincha Islands, and now prepared to make contracts for the spring supply. As the demand is large we would advise all who may be in want of this valuable manure to make early application. Price, $50 per ton of 2,000 pounds. Be particular to observe that every bag is branded,

Warranted No. 1 Peruvian Guano.

Imported into the United States by F. Barreda, Brothers, for the Peruvian Government.

LONGETT & GRIFFING

State Agricultural Warehouse, No. 25 Cliff-street, New-York.

Oct. 20th—w&mtf.

Fertilizers.

PERUVIAN GUANO, Super-phosphate of Lime of the following brands, Deburgh, Paterson, and Wood,
Bone Dust—sawings or meal, turnings and ground,
Potash Scrapings, Pulverized Charcoal,
Ground Land Plaster, Sulphuric Acid,
For sale at the State Agricultural Warehouse of
LONGETT & GRIFFIN,
Jan. 17—w2m—m4t 25 Cliff street, New-York.

Eggs for Hatching.

THE subscriber offers for sale, during the coming season, Brahma Pootra Eggs for hatching, at $4 per dozen, sent to any part of the United States or Canadas. Expenses paid to New-York, Albany or Boston.

My stock is inferior to none in the United States.

Any one purchasing Eggs of me, that is not pleased with the chicks in the fall, the money will be refunded.

Reference will be given if required.

DARIUS GARDNER,
Jan., 1854—m4t Norwich, Conn.

Shepherd Wanted.

WANTED—an experienced Shepherd to take care of a flock of sheep near Boston. Address, with terms and references, to HOVEY & CO.,
Dec. 1—mtf 7 Merchants' Row, Boston.

Basket Willow.

CUTTINGS of the best European OSIER WILLOW will be furnished by the subscriber at $3 per thousand. They can be forwarded during the winter to any part of the Union. Orders will meet with prompt attention.

Address C. P. WILLIAMS,
Jan. 1—mtf Albany, N. Y.

Willow Cuttings and Raspberries.

FOR sale, cuttings of the three best varieties for American culture, (*Triandra*, *Forbyana*, and *Purpurea*,) for account of which see Country Gentleman of November 27th.

Also, Hudson river Antwerp Raspberries of excellent quality. CHARLES DOWNING,
Jan. 19—w4tm2t Newburgh, Orange Co., N. Y.

Short-Horned Bulls & Suffolk Pigs for Sale.

I HAVE three one-year old Bulls for sale, got by my imported bull Vane Tempest—colors, roan and red.

Also, a few pairs of choice Suffolk Pigs bred from my imported stock. J. M. SHERWOOD,
Jan. 20—w3tm2t Auburn, N. Y.

I HAVE on hand and for sale two Short-Horn Bull Calves, of good pedigree and fashion. JOHN R. PAGE,
Jan. 12, 1854—w4tm1t* Sennett, Cayuga co., N. Y.

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb. 1—m1y Braintree, Mass.

Brahma Pootra Fowls and Eggs for Sale.

THE subscriber offers for sale the most beautiful Brahma Pootra Fowls that can be found in the country. Also, Eggs from the same fowls next spring and summer. Price of fowls, $10 to $50 per pair; eggs, $6 per dozen.

Also, buff colored Shanghais and Eggs.

Fowls cooped and Eggs carefully packed in spring boxes, and sent to all parts of the country, by addressing, post paid,

E. GILES,
Jan., 1854—m2t Sauquoit, Oneida Co, N. Y.

For Sale or Lease,

5,000 ACRES OF CHOICE FARMING LANDS in Gallatin county, Illinois, in the immediate vicinity of the extensive Mining operations of the Shawnee Coal Company. A cash market for all kinds of farm products at the mines. These lands will be sold or leased to good farmers on accommodating terms.

For particulars, apply to H. H. CASEY, Sec'y,
Corner Hanover Square and Pearl street.
New-York, Feb. 1, 1854—m5t

Isabella Grape Vines,

OF proper age for forming vineyards, cultivated from, and containing all the good qualities which the most improved cultivation for over fourteen years has conferred on the Croton Point Vineyards, are offered to the public. Those who may purchase will receive such instructions for four years, as will enable them to cultivate the grape with entire success, provided their locality is not too far north. All communications addressed to R. T. UNDERHILL, M. D., New-York, or Croton Point, Westchester Co., N. Y., willl receive attention. The additional experience of two past seasons, give him full assurance that by improved cultivation, pruning, &c., a crop of good fruit can be obtained every year, in most of the northern, and all the middle, western, and southern states.

N. B. To those who take sufficient to plant four acres, as he directs, he will, when they commence bearing, furnish the owner with one of his vinedressers whom he has instructed in his mode of cultivation; and he will do all the labor of the vineyard, and ensure the most perfect success. The only charge a reasonable compensation for the labor. R. T. U.

Jan. 20—m2t—w2tF&4tM

Contents of this Number.

National Consumption of Crops, ... 73
Cheap Cisterns, by J. H.—Notes on Farming, by JOHN J. CRAIG, ... 74
Letters on British Agriculture—Field Culture, by J. A. NASH, ... 75
Important Suggestions about Grasses, &c., by WM. H. BREWER, ... 77
Draining Ponds—Preparation of Bones for use, by J. L. EDGERTON—Cow Milkers—Bommer's Manure—Fattening Animals with Cod-liver Oil, ... 78
Plans laid in Winter—Application of Manure, by WM. J. PETTEE—Kentucky Blue Grass, by A SUBSCRIBER 79
Potato Culture—Soils—Bones, by N., ... 80
Water Pipes—Reels for Reapers—Posts heaving by Frost, ... 81
Gas-Tar—Spring Wheat—Churning by Steam Power—Farming in Bristol, Vt., ... 82
Theories and Experience—Root Culture. by W., ... 83
De Burgh's Superphosphate of Lime, by JAMES McMILLAN—Notes on Oregon—Inquiry, by A STEUBEN SUBSCRIBER—Mixing Soils, by J. H., ... 84
Annual Meeting of the N. Y. State Ag. Society, ... 85
Executive Committee Meeting—Winter Exeibition, ... 86
Budding and Autumn Grafting—Strawberry Destroyed by Grubs—Time for Grafting the Apple—Place for Grape Borders, &c., ... 88
Insect on Fruit-Trees—Easy way to have Parsley all Winter, by C. S.—New Mexican Cactus, ... 89
Perpetual Bearing Strawberries, by R. G. P.—Hautbois Strawberry and Charter Oak Grape, ... 90
The Lawton Blackberry—Dwarf Pears and Quince Stocks, ... 91
Disease in Peach Trees—Nurseries and Nursery Agents—Renovating old Orchards, ... 92
Impermanent Manures the most Permant, by N.—Clearing and Cultivating New Land—Mowing Machine, ... 93
Improved Short-Horned Cow Jacintha—Inquiry about Cattle, by A. T. TUTTLE, ... 94
New Oxfordshire Sheep, by E. L. HOLDEN—Horn Distemper, &c., in Cows, by CHARLES BABCOCK—Profitable Sheep, by WM. BREWSTER, ... 95
The New-York State Poultry Show, ... 96
Care of Cows, Profits, &c., by W. A. ELA—Trench Plowing for Young Trees, ... 97
Notes for the Month, &c., ... 98

ILLUSTRATIONS.

New Mexican Cactus, ... 89
The Lawton Blackberry, ... 91
Improved Short-Horned Cow Jacintha, from a drawing by H. STAFFORD, Esq., ... 94
New-Oxfordshire Ram, ... 95

Garden Implements.

HEDGE. LONG HANDLE AND SLIDING PRUNING Shears; Budding and Edging Knives; Pruning Hatchets, saws and knives; pruning, vine and flower scissors; bill and Milton hooks; lawn and garden rakes; garden scufflers, hoes of great variety, shovels and spades; hand engines, which throw water forty feet or more; syringes and water pots; grafting chisels. tree scrapers, and caterpillar brushes; transplanting trowels, reels; hand plow and cultivator, very useful to work between rows of vegetables, together with a large assortment of other implements too numerous to mention.
R. L. ALLEN,
Feb. 16—m3tweowtf 187 & 191 Water-st., New-York.

Seeds! Seeds!

FIELD AND GARDEN SEEDS, of all the different varieties, at the State Agricultural Warehouse.
LONGETT & GRIFFING,
Feb. 16—w6t—m2t No. 25 Cliff st., New-York.

North River Agricultural Warehouse and Seed Store.

No. 53 Cortland-Street, New-York,

WHERE may be found a large and complete assortment of the best and latest improved Agricultural and Horticultural Implements, Field and Garden Seeds, Fruit and Ornamental Trees, Fertilizers of all kinds, &c., &c.
March 1—mtf GEO. H. BARR & Co.

SHEPHERD DOGS.—*WANTED, one of the above Dogs* of the Scotch Collie breed. He should be under one year old, and partially trained. Name lowest price at once, which must be moderate.
A. B. ALLEN,
Feb. 16—m&w1t 189 Water-st., New-York.

Field and Garden Seeds.

SPRING WHEAT, Barley, Oats, Grass Seeds, Clover, Fresh Ray Grass, Lucern and White Clover just imported.

Excelsior Potatoes, a new and improved variety, Belgian Carrot, Sugar Beet, &c.

Garden Seeds of all kinds, including Flower Seeds.
R. L. ALLEN,
Feb. 16—m3tweowtf 189 & 191 Water-st., New-York.

Fertilizers.

SUPERPHOSPHATE OF LIME, NO. 1, of the best manufacture; Peruvian Guano, fresh, No. 1; Poudrette; Plaster of Paris, &c.
R. L. ALLEN,
Feb. 16—m3tweowtf 189 & 191 Water-st, New-York.

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price.
GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by
GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."
GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

Ground Bone.

THE subscribers are now prepared to furnish Bone Dust by the barrel or ton in its pure and most efficient state, ground to any desired fineness. GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Super-phosphate of Lime.

THIS article was first introduced into England twelve years since, from its magic effects. It became one of the most popular manures in use, and holds the highest in rank next to guano. It was introduced about two years ago in this country, made in a much superior manner, with all the modern improvements of a very learned agricultural chemist, adapted to our soil, which has improved its fertilizing effects equal to guano. Hence we offer a pure article composed entirely of Phosphate of Lime, Sulphuric Acid, Peruvian Guano, and Sulphate of Ammonia. The latter is the article, and one of the most efficient agents in the best Peruvian Guano, at $45 per ton of 2,000 lbs.

Every bag will be branded.
LONGETT & GRIFFIN,
State Agricultural Warehouse, No. 25 Cliff street, N. York.
Jan. 21—wtf

THE CULTIVATOR:

A MONTHLY JOURNAL OF

Agriculture, Horticulture, and Domestic Economy.

THE PRICE REDUCED TO 50 CENTS A YEAR.

All subscriptions must commence with the January No and the payments must in all cases accompany the order for the paper.
LUTHER TUCKER,
Publisher, Albany, N. Y.

Single copies, Fifty Cents—Eight copies $3—any larger number at the same rate.

Postmasters and all friends of agricultural improvement, are respectfully invited to act as agents for THE CULTIVATOR and THE COUNTRY GENTLEMAN.

THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

Vol. II. ALBANY, APRIL, 1854. No. IV.

Letters on British Agriculture—XI.

ON DEEPENING THE SOIL.

Amherst, January 16, 1854.

L. Tucker, Esq.—When speaking of the *Field Culture* of English farmers, I stated that their theory, with regard to deep cultivation, is in advance of their practice. By this I meant no reproach to them as a class.

It would be strange, if the leading minds of a great industrial interest should not assure themselves well of the truth of a theory, before they reduce it to practice; and it would be stranger still, if the mass of their brethren, in a country where every thing is conservative, should not be slow to imitate *new things*, even when proved to be beneficial. These considerations sufficiently explain the slight discrepancy, of which I have spoken, between talk and works.

But what is the prevailing theory of British farmers, with regard to deep cultivation? and what proofs are there of its soundness? Ought that theory to be practiced in that country and in this?

1. The prevailing theory of British farmers is, that the ground, when no manifest reason for the contrary exists, should be loosened, not merely from three to five inches, but from thirteen to twenty. Some would advocate trenching with the spade. The effect of this would be to mix the upper and lower soil nearly equally together. If by possibility this course might be judicious on any of their soils, where produce is dear, and where labor is worth but from 1s. 6d. to 2s. 6d. a day, without board, it would by no means follow that it would be wise with us, where labor is dearer and produce cheaper.

Others would advocate trench plowing, to a depth of 13, 15 or 17 inches, the effect of which would be partly to mix, but mainly to invert the soil. To do this at random would be little less than insane. What if the subsoil should be so charged with the sulphate or protoxide of iron, or with some other poisonous ingredient, that no crop could grow on it for two or three years? Or what if the subsoil were so porous, a mere bed of gravel, as sometimes (not often) happens, that the surface soil would run away through it? or what if the newly exposed earth were too cold for successful cultivation the first year? No man should exchange his top soil for a deep subsoil, till he knows well what he gives and what he gets. If his top soil be unusually exhausted, and he knows by analysis or by a previous experiment, on a small scale, that his subsoil is fit for the immediate production of crops, it may then be wise to trench plow to almost any depth, but not otherwise.

This leads me to remark, that while some British farmers would recommend spade-trenching, and others trench-plowing, more, and, I think, a better class of farmers, would advocate plowing, so as to invert the soil from three to eight inches, according to its character, say, on ordinary lands, about six inches, and then following with a subsoil plow, stirring the soil, but not inverting it, to a depth of from 13 to 20 inches from the surface. This course has the advantage, 1st, of avoiding the danger of bringing up to the surface substances unfit for promoting the growth of plants; and, 2d, of putting the subsoil into a condition to be warmed, and deprived of hurtful ingredients, so as to be fit to be brought up at subsequent plowings. The idea is, that we should not bring up the subsoil at random, when it may prove less valuable than the soil before on the surface, and may very possibly ruin one, two or three crops before it becomes fit for use; but should first subject it to an ameliorating process, by loosening it, by giving air and water a free passage through it; and then should bring it up by degrees, watching the effect, and hastening the process more or less, as we see the effect to be favorable or otherwise.

Farmers in all countries, I suppose to be prudent, cautious, thinking men. The very nature of their employment would make them such. They are not aroused to improvements; but they wish to know whether proposed changes *are* improvements, or whether they are mere innovations, before they adopt them. For any important change, especially for one involving an increased expense of cultivation, they want a reasonable theory, one which approves itself to their judgment, *looks* as if it might be beneficial; and then they wish it tested by actual experiment. Now is the prevailing theory of British farmers, as I have stated it, reasonable? If you invert the soil to a depth of six inches this year and subsoil ten or twelve inches deeper; if then you increase the depth of the plowing an inch each year, and repeat the subsoiling once in two or three years, till you get a fine tilth twelve or fifteen inches deep, is it reasonable to suppose that the crops will be increased? Is it reasonable or not, to suppose that twelve inches of soil, permeable by the plant roots, will give more nourishment to the crop than six? I think it is; and in this I am confident that practical farmers will agree with me. They will say, "the theory looks well; as a theory, we like it; it seems reasonable." They will admit, that, if the air, charged, as it always is, more or less, with watery vapor and with nutricious gases, both ready to be deposited for the benefit of plants, circulate deeply through the soil, a more equable distribution of warmth and moisture about the plant-roots will be promoted; that soils, by this free circulation of air, will sooner be weathered down to a desirable state of fineness; that the plant-growing ingredients, locked up in them, while in a coarse state, will more readily become available to growing crops; and that *probably* their productiveness will be increased by all these changes. But, as prudent men, they want something more than *probability*. Before adopting more expensive modes of culture, they want something approaching to certainty; and in this they are right.

2. What then are the proofs of the soundness of this theory? In the first place, we have seen that it is reasonable. To use a homely, but significant expression, "it stands to reason," that a deep pulverization of the soil will increase its productive powers. In the second place, we have the testimony of the most scientific men, that such ought to be the effect, according to the well known laws of nature. Sir Humphrey Davy declares that "fertility is much connected with the power of soils to absorb moisture from air," and that "the power of a soil to absorb moisture, by attraction, depends, in a great measure, upon the state of division of its parts," upon "its being so loose and light as to be freely permeable to the atmosphere." In the third place, we have, what is after all the most reliable—the undivided testimony of practical men—men who have themselves made the experiment of deeply pulverizing the soil. The system, which I would earnestly recommend to farmers of this country, with exceptions however to be named hereafter, is sometimes called Dean-Stonozing, from its being first adopted by Mr. Smith, of Dean Stone, in Sterlingshire, Scotland. I cannot better describe it, than in the words of Cuthbert W. Johnson. He says: "By this system, by means of a subsoil plow, of which there are several kinds, the subsoil, or under crust of the earth, is merely broken and pulverized, say, to a depth of from 14 to 20 inches, without being brought up to the surface, or mixed with the upper soil." Mr. Smith, the inventor of the system, when under examination before the Agricultural Committee of the House of Commons, in 1836, said: "The subsoil plow has been constructed on principles appearing to be best fitted to break up the subsoil completely, to a depth sufficient for thorough cultivation, say 14 to 16 inches, whilst the active soil is still retained on the surface—to be of the easiest possible draft in reference to the depth of the furrow and firmness of the subsoil—to have strength and massive weight sufficient to penetrate the hardest stratum—to resist the shocks from fast stones—and to throw out all stones under 200 lbs. weight. All this has been accomplished and practically proved at Deanstone over an extent of at least 200 acres of various soils; and also in various parts of England, Scotland and Ireland, during several seasons." This was now twenty years ago. Three years later, in 1839, at a meeting in Manchester, Mr. Smith said, that "the subsoil plow had not only been efficacious in England, Scotland and Ireland, but it had been introduced into the stubborn soil of the West Indies. He knew many instances of its success on light, gravelly and moory soils. He mentioned one instance, where it had been tried on such a soil in Perthshire, which subsequently produced one of the most splendid crops of barley ever grown in that country. He had also letters from farmers, who had tried the plow upon all bottoms, chalky, flinty, gravelly and moory bottoms, level soils, stiff clays, and almost every variety of subsoil found in these Islands, and without a single failure. He was frequently asked as to the propriety of using this plow before draining; and he would say, that if the ground was completely drained by nature, by its resting on a gravelly or sandy bottom, then the subsoil plow might be safely, and with advantage used at once; but if the bottom were clay, or any stiff, hard subsoil, that retained the moisture, then the subsoil plow must be withheld, till the land had been drained, because its application but made a greater space to hold water."

Such are Mr. Smith's views of the benefits of deep cultivation; and such his statement of the only exceptional case—that of lands not "completely drained" by nature and not artificially drained—an exception, with regard to which, I believe all agree that subsoiling is useless, or worse than useless, till the under water is disposed of. But lest any should believe that Mr. Smith, though a practical farmer, may possibly be more anxious to promote the sale of a particular plow, than to benefit his brother farmers, I will now adduce the testimony of men, who cannot by any possibility be suspected of any undue bias. Sir James Graham, after stating the results of experiments carefully conducted himself, showing an astonishing increase of fertility by deepening the soil with the subsoil plow, remarks: "I am quite satisfied, that the use of the subsoil plow is no less applicable to dry land, than to wet; on wet land, it insures and increases the operation of the drains; but, on all land, by loosening the substratum, it adds to the effective depth of the soil, whereby the nourishment to the plant is augmented; the root takes a deeper hold; and a more genial temperature is maintained below the surface, throughout the year. If I mistake not, it will be found that sandy loams, no less than stiff clays, profit by this system of subsoil plowing; and that on dry land, no less than on wet, where sterility is the consequence of a hard, hide-bound, hungry subsoil, Mr. Smith's treatment is correct, which breaks the crust without bringing it to the surface, until in time it has been mellowed by the natural effects of atmosphere and rain."

Mr. Viall, as reported by Cuthbert W. Johnson, stated that "He used the subsoil plow on a piece of light land for turneps, &c.—plowed it with the common plow 5 or 6 inches, and then with the subsoil plow 10 or 12 inches." He says further: "I then sowed it with barley; the crop was good, and it never faded away; it was a hot piece of land, and in dry weather some of it would burn, but after using the subsoil, *it did not.*" He said he had also used it successfully on heavy clay land.

We have the very general, and so far as I know the uniform testimony of British farmers to the benefit of subsoiling on all lands not troubled with under water. There can be no doubt, that the deepening of a soil, by first stirring the under crust with the subsoil plow, and then bringing it up gradually with the common plow, greatly increases its capability.

3. It might not however be advisable for all who cultivate the ground to go into it at once. There is a question of time;—in our new states, where the surface soil is rich, and yet shows no symptoms of exhaustion, the time for deepening the cultivation may not have yet come. There is also a question of economy;—in regions far removed from a good market, it might not pay. Possibly there may be lands all over our country, which, owing to some peculiarity of the subsoil, it might be wise to "skim over," and to take from them what the surface will give. But with these exceptions, if they are to be admitted as such, of which I have some doubt, an opposite policy should prevail. Especially should it be so in those parts of the country where lands are dear and good markets are at hand. The soil should be mellowed, weathered, mixed, enriched by a free circulation of air, made fit for the roots of plants two or three times as deep as has been usual. It is true that the expense of plowing will be increased. But every other branch of the husbandry will be cheapened. Crops, on land thus cultivated, will require less seed and less manure; will be more easily kept clear of weeds; will grow more luxuriantly; be less liable to injury from sudden changes of temperature, and from protracted drouths or excessive rains. J. A. Nash.

Flax Culture.

Messrs. Editors—If the present duty on imported flax should escape reduction or abolition during the curret session of Congress, there seems to be a good prospect that the growth of flax may soon become a more common, as well as a more profitable employment. Linens and other fabrics from flax, are getting into a more general use; and a market for flax is much more accessible than it was a few years ago. A company was some time ago organized at Fall River, Mass., for the purpose of spinning and weaving flax into the various fabrics which are manufactured from it. "The American Linen Manufacturing Company" has been in operation now about one year, and finds itself cramped in its operations for the want of sufficient quantity of the raw material. To do something towards the supplying of this want a gentleman connected with the "American Linen Manufacturing Company" at Fall River has made a journey through some of the western states, with a view of inducing farmers to engage more extensively in the growth of flax, inasmuch as this company will supply a larger market than has heretofore existed in the United States. In a letter addressed to Governor Wright of Indiana, he says that the Am. Lin. Man. Co., expects to consume in the ensuing twelve months, over six hundred and fifty tons of flax fibre; and that when in full operation, it will consume annually over one thousand tons, or two millions of pounds. For want of a home supply the company has been obliged to import, during its first year, over one hundred tons, or two hundred thousand pounds, at an expense of over $30,000.

It appears from the letter above referred to, that flax is cultivated to a considerable extent in Indiana and Ohio, but principally for the sake of seed. The stalk and its fibre are generally wasted and thrown away. Now that a home market is provided, the fibre will be saved, making the crops of flax in these states much more profitable, and leading to a much more extensive cultivation of it.

In regard to the profits of flax culture we glean the following cheifly from the letter of the agent of the Am. Lin. Man. Co., to which we have already referred. He states that if farmers would prepare their soil *well*, and would then sow two or two and a half bushels of seed, they would obtain twenty bushels of seed, and two to two and a half tons of flax straw to the acre. In Ohio and Indiana, for the want of proper preparation, an average of only ten bushels per acre is obtained, and about a a ton or a little more of flax straw. This small yield is attributed to poor preparation of the soil, and to thin sowing. Every ton of straw, the agent says, yields three hundred pounds of flax fibre, so that those who were at due pains to raise the large crops above named would have, after rotting and scutching, about six hundred to six hundred and fifty pounds of marketable flax fibre. "For this fibre," says the agent in his letter to the governor of Indiana, "we would gladly contract for two years to come, at the rate of 12½ to 15 cents a pound ($250 to $300 per ton,) according to quality. It costs us this price, cash, to import it, and we should much prefer paying it to our own industry.."

That these estimates, as to the yield of a flax crop, are not materially exaggerated, we infer from a communication from Mr. W. G. Edmundson, of Iowa, in the volume of the *Cultivator* for 1852. Mr. E. there states that he has grown flax quite extensively, finding little difficulty in growing it on a rich soil preceding wheat. He says that with proper cultivation there is no difficulty in raising from 15 to 20 bushels of seed, and from 300 to 400 lbs. of good clean scutched flax to the acre The seed may generally be sold for $1, or $1,25, and at almost any distance from Fall River or other market, the fibre may be sold for at least 10 cents per lb. At these rates an acre will yield from $45 to $65; or, after making a large allowance for harvesting, rotting, scutching and cleaning, a clear profit of $30 to $50 per acre. This is fully better than raising wheat even at the present high prices.

As many will be induced by such considerations as the foregoing, to engage in raising crops of flax, you will oblige your readers, Messrs. Editors, by collecting and publishing all the *reliable* information you can procure. Observer.

Tobacco Culture in the Northern States.

Messrs. Editors—During the last few years the weevil or wheat midge, (*Cecydomyia tritica*,) has destroyed a large portion of the wheat crop in many parts of the wheat-growing district in western New-York. Wheat has been our great staple, but the midge annually spreads more and more, until finally the whole wheat district will probably be more or less infected by this pest. The wheat crop in Yates county, is at least one third below an average yield. If we cannot make money raising wheat, perhaps other things may be grown, equally if not more profitable. Among these we rank tobacco, which, if rightly cultivated, will yield large profits. According to the census report of 1850, there were produced that year in the United States, 199,739,746 lbs. of tobacco, of which more than one-half was raised by Virginia and Kentucky. Ohio produced 10,454,449 lbs.; Connecticut, 1,267,644; Massachusetts, 138,346; Pennsylvania, 912,651; Illinois, 841,394; Indiana, 1,044,620; N. York, 83,189 lbs. Ohio produces more than all the other free states.

Connecticut has long grown tobacco. According to Henry Watson, in the Cultivator of 1844, about 500 tons are grown annually in the valley of the Connecticut, of which the town of East Windsor produces 300 tons. Mr. Watson states that the yield of 1843 was less than usual, 1,500 lbs. being about the average per acre. They cultivate two varieties of the weed—the broad and narrow leaf. The latter is about two weeks the earliest. Their soil and climate seem to be peculiarly adapted to the production of a superior article, one pound in market being worth nearly as much as two pounds of Virginia or Kentucky tobacco. This variety is known as the "Connecticut Seed Leaf." In the Albany Cultivator of 1847, are some remarks of the editor on the cultivation of tobacco in the valley of the Connecticut river. He says—"To give a profitable crop there, requires pretty rich land—though the sandy soils manured at the rate of ten or twenty common two-horse or ox loads of manure per acre, produce well. With good management the usual yield is from 1,500 to 2,000 lbs. per acre of marketable tobacco, and an average return of $100 to $160 per acre. With the course that is there pursued, tobacco is by no means an injurious crop to the soil: on the contrary it is found to be an ameliorating one. The liberal manuring and clean cultivation necessary to bestow on the tobacco, fits the soil admirably for other crops; and it is found that wheat and other grains and grass flourish better where tobacco forms a part of the rotation. Messrs. Lathrop mentioned an instance of their having put $36 worth of manure on an acre and an hundred rods of land which they planted with tobacco. They got a ton of tobacco which they sold for $160. They sowed the same land to wheat and got 30 bushels. The next crop was hay, and gave at two cuttings four tons. The stalks of tobacco, after the leaves have been taken off, are scattered over the ground and plowed in, or placed in the manure heap to rot. It is known that their ashes contain a large proportion of potash. We are told that where two or three stalks are left on grass ground their effect is very visible in the rank growth of the grass around."

The following estimate of the cost of raising one acre of tobacco, is taken from the New-York Farmer and Mechanic. It is estimated from several acres which averaged one ton per acre, which was sold at $160 per ton:

Use of one acre of land one year,	$15 00
10 loads of manure at $2,50, carting and spreading $5—one-half is	15 00
Plowing twice,	3 00
Harrowing and marking,	1 00
7,000 tobacco plants, at 50 cents,	3 50
Setting plants,	3 00
Hoeing four times,	5 00
Killing worms,	2 00
Topping, &c	4 00
Cutting and hanging up to dry,	4 00
Stripping from stalk and packing,	5 00
Rent of shed to dry in,	4 00
Freighting to Warehouse Point,	3 00
	$67 50

Deduct $67,50 from $160, leaves $92,50 profit.

Mr. Nelson Thompson, the President of the Yates Co. Ag. Society, has cultivated tobacco during the last two years. The last year he had planted between 13 and 14 acres, of which he estimates the average yield between 1,800 and 2,000 lbs. per acre. His soil is good, and he manures highly. He estimates the value of his tobacco, at present prices, to be at least $2,000. Admitting that one-half of that is for expenses, which is too large an estimate, he has a clear profit of at least over $70 per acre.

The Northern States have millions of acres well adapted to the culture of tobacco, nor is there any probability of too many engaging in it. In Virginia there is said to be a large deficit in the yield during the last few years. Its use increases in spite of anti-tobacco societies. In proportion to the decrease in the use of ardent spirits, will that of tobacco increase, because very many will use something to excite or quiet the nerves.

Those who wish to obtain information concerning its culture, will find a detailed account of the method practiced in Connecticut, in the Albany *Cultivator* of 1844. Yours truly, S. B. Buckley. *West Dresden, Yates co., N. Y.*, *Feb.* 1, 1854.

Prices of Breadstuffs.

A gentleman, who spent a large portion of the past year in Europe, assures us that the reported deficiency of breadstuffs in Europe is *real*. It is larger than is generally believed. The aspect of European affairs warrants the belief, that the demand for American produce, already large, will increase rather than diminish, for months to come. In this state of things, immigration will be likely to equal, at least, any former examples. Between an increasing foreign demand and an augmented home market, the American farmer need have no fear but that he will be able to sell, at remunerating prices, all he can raise. Whatever surplus may have accumulated, in past years, is now in a fair way to be exhausted; and it may be set down as a certainty that the produce of American farmers, for 1854, will sell, according as the season shall be fruitful or otherwise, at remarkably high, or at least, at remunerating prices. It is the *manifest destiny* of the farmers of this country, to feed thousands of Europeans in their own lands, and thousands more, who will come and eat their bread and meat on our shores; and as now is the time for them, if they have not already done it, to lay their plans for the coming season, would it not be well for them to take these things into account, and see in what way they can increase their productions above those of former years.

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Experiments with Superphosphate of Lime.

Messrs. Editors—Having been an old subscriber to your Cultivator from the year 1843 to 1850, and having recently subscribed again, including the numbers for last year, 1853, I find upon reading the number for May, that a correspondent who signs himself C. D. P., of Waterville, makes some inquiries of you in regard to the superphosphate of lime manufactured by "Professor" Mapes and Mr. De Burgh; and as you are unable to answer definitely as to the results to be obtained from its use, will you allow me, even at this late day, to state to your correspondent the results of my experiments of last year.

I have been a regular subscriber and a firm believer in Mapes' "Working Farmer," for the last three years, and thinking him honest, when he tells us that it is cheaper to buy his phosphate at $50 per ton, than to have yard manure given us and cart it two miles to our farms, I bought about two tons last spring, a part from his agent, Mr. McCready, and the balance carted from his factory. Upon turning to my farm diary, I find that from the 26th to the 29th of March last, I sowed four acres to oats; the two acres comprising the upper parts is gently sloping to the south-east, and on one acre of that I applied 600 lbs. of Mapes' superphosphate, and on the other acre, 450 lbs. of guano, composted with plaster. All was then thoroughly harrowed and rolled in with the seed. The land was plowed 10 inches deep, and was in fine mellow condition; and moreover the season here was rather wet and favorable. Thus you see everything was in favor of the action of the superphosphate, (if it ever acts at all,) and I assure you I looked forward to at least one noble acre of oats. The balance of the field was limed with 100 bushels on one acre, and a part of the fourth had a heavy dressing of ashes, and a couple of lands were sown without anything.

Now for the result. From the time the field began to show a green covering, you could see a marked difference in favor of the guano, and none whatever in favor of the phosphate; and at different periods until harvest, I have shown it to friends visiting me, and as far as we could see the field, so far was the difference to be seen, that part guanoed being of a deep dark color, and from six inches to a foot higher than any other in the piece. A few handfuls having been scattered over the last open furrow, being a little left in the bag, there was the same marked difference. The part dressed with the phosphate never showed the least difference from the lands left unmanured, and the lime and ashes gave a larger growth of straw and a much heavier crop of grain than the phosphate; in fact, the entire money paid for the phosphate was completely thrown away, as far as any increase of crop was concerned. To show you the result at harvest; we could not bind the oats grown on the phosphated acre, but the average length of the straw on the guanoed was over four feet by actual measure, and very heavily loaded with grain, giving, in the opinion of all who saw it, more than double over its phosphated neighbor; and this was the result at threshing time.

I also used it upon corn, at the rate of 800 lbs. per acre, and side by side with hog manure plowed under, the ground being plowed 12 inches deep by a team of horses and oxen together; and the result was more striking if possible than with the oats. There was at least double, both of corn and stalks, where the hog manure was applied; and being nearer the house than the oats, I had the pleasure of showing it to more of my neighbors and friends. Both pieces were planted on the 2d of June, and where we gathered good, long, sound and ripe ears, from the manured part, we only got a moderate crop of nubbins and hog corn, as the result of nearly 600 lbs. of superphosphate

I also applied it to cabbages, tomatoes and early sweet corn, and I assure you, on my honor as a man, that investment of about $100 in phosphate, including freight, cartage, &c., independent of spreading, has not benefited me $10. And I can name at least six of my neighbors who will give similar testimony; in fact, a neighbor who is uncommonly well posted up in all that pertains to farming, boldly asserts that any man with $10,000 over and above his farm, who strictly follows all the directions of the "Professor," will, at the end of five years, find himself minus all his cash; and I feel almost ready to endorse the assertion.

I would rather pay $1,50 per load for good stable manure and haul it two miles, than give $10 per ton for Mapes' phosphate and pay the freight or draw it from his factory. The fact is, we farmers do not want men who sit all day in their office or sanctum to give us instructions in farming, but men who have at some time of their lives worked upon the farm and entered into the details of all its operations; but these men the "Professor" calls, very contemptuously, "mere laborers," not scientific farmers. I have been to his farm at Newark many times, and never yet saw him outside of the office, all the farming operations being conducted under the direction of an intelligent foreman, whom I consider much the best practical and scientific farmer of the two.

Your inquirer will see by my experiments, that I applied the maximum instead of the minimum quantity of phosphate recommended by Mapes for field crops. I did so with a view to obtaining full results, and also to have the clover with which I seeded the oat ground, receive its share of benefit.

I can, if it were necessary, give you the name of a very scientific farmer, in my neighborhood, who last spring bought about a ton of Mapes' phosphate, and applied it to various crops of vegetables which he was raising for his family use, and he has assured us he could not see the slightest degree of increase during their growth or at the time of harvesting them ; but from every load of good horse manure drawn from the village and properly applied, the good results and increase of crop were very apparent. I do not doubt the good effects of phosphate, when properly made and applied, under certain circumstances and conditions of soil and crop; but from my own experience and that of others, I *do doubt* the profit and expediency of its indiscriminate use under all circumstances, as is recommended by those interested in its manufacture and sale. And further, I know it is not pleasing to the subscribers of an agricultural paper, to have a large portion of its columns taken up with affidavits of the workmen engaged in manufacturing a manure in which its editor is more interested than in the real success of the paper. Yours truly, F. C. L. *Rahway, N. J., Feb.* 18, 1854.

How to procure Guano for a Wheat Crop.

How to procure guano for a wheat crop? Why, send the money to Longett & Griffing, of New-York, and you will receive guano in return if you so order it, the captious joker will say. Even so. But how obtain the money for *that* purpose, without trenching upon any extraneous source? "Why," says the joker, "the extra product of wheat will pay for the guano." Possibly it may, and more gain if it do. How to procure guano for a wheat crop? I will tell thee, gentle reader.

Instead of sun drying your land all summer in the fallow system, plow it crosswise in the first week of June and drag it without lapping, and sow, broadcast, from three to four bushels of Indian corn—and sweet garden corn if you can obtain the seed—and then cover it up with a gang plow or large cultivator. Take no further care till the last week of August, when you must mow down the corn fodder, tie it up in bundles and remove it to an adjoining field, for the purpose of clearing the ground for plowing, and set the bundles up in shocks, and as soon as cured, put it into large cocks, say a load to a cock, and let it take a *sweat*. In a dry spell of weather open the cocks in the morning and cart to the barn in the afternoon, and stack it in the mow same as hay, and salt every two layers of bundles at the rate of a barrel of salt to five acres of fodder. Or if you like it better, stack it to the weather, in long, narrow stacks, in joints about ten feet long, and thatch it with straw, English fashion.

The fodder from one acre, when cured, will weigh from four to seven tons. Mr. ALPHEUS MORSE, of Eaton, told me at our county fair, that he had weighed half an acre of dry corn fodder, and its weight was three and a half tons, or seven tons to the acre. His farm, it must be borne in mind, is in a very high state of cultivation. This corn fodder is worth $10 per ton when hay is worth $7. Four tons at $10 per ton = $40 per acre. Seed, $3; mowing and binding, $2; carting, $1,50 = $6,50. $33,50 *profit on the acre to buy guano with!* The land is left perfectly clean and mellow, and there is no loss in the consumption of the fodder, for the cattle do not leave a sign of it in the manger.

For soiling milch cows in the dry months of August and September, corn fodder is a complete stop-gap to the cows drying up, an object aimed at by all practical men. Half an acre is amply sufficient for ten milch cows. Try it, brother farmers, and see how much money you have lost in your lifetime.

If these calculations be correct, what an immense amount of fodder is lost every year in New-York state alone; for it is well known that all soils suitable for wheat will grow corn fodder to perfection.

Who will profit from the fact, that one acre of corn fodder will buy two hundred weight of guano to the acre for six acres of land? Corn fodder will revolutionize farming in the northern states. JOHN R. CHAPMAN. *Orchard Cottage, Oneida Lake, Madison co., N. Y.*

Culture of the Potato.

A friend sends us the following, as what he believes the best means yet known for avoiding the potato disease:—

1. Be content with a medium crop, say 100 to 150 bushels to the acre, selecting land but moderately rich, and using no stimulating manure. The land should be a lightish loam, easily permeable by water; and it would be well if it had been treated with no stimulant, nitrogenous manure the preceding year.

2. Let the land be brought into fine tilth by means of the plow and harrow, to a depth of five or six inches, as early as may be in the spring. Furrow both ways, at a distance of three feet, letting the plow incline to the mould-board side, so as to give a broad, shallow furrow, of about three inches deep.

3. As manure for one acre, take 50 bushels of charcoal dust, or if this is not at hand, 50 bushels of dry, well cured peat, or if neither of these is conveniently to be had, 50 bushels of turf, piled up the summer previous and rotted down to a fine powder with a little lime; add 10 bushels of unleached ashes; 5 bushels of oyster shell lime, or common slaked lime, or leached ashes, whichever can be obtained with the least trouble; 2 bushels of plaster; 1 bushel of bone-dust; and 1 bushel of common salt; mix the whole thoroughly together, and throw it into the crossings, a little less than a pint in each, in that careless sort of way, which will cause it to spread itself over at least a square foot.

4. For seed, select sound potatoes, of medium size or a little less, and plant one in a hill, and never more than one, if it be ever so small, without cutting. Plant as early as can be done with safety to the crop from spring frosts. Should the weather be wet after planting, shallow covering would be the best. If it should be dry, deep covering would be more favorable. It would be perhaps the safest, over such manure as I have prescribed, to cover the seed nearly three inches

deep, which would bring the top of the hill just about even with the average level of the field.

5. For the first hoeing, the harrow, or cultivator, might be run through both ways, and the plants should be weeded, but not hilled, or at most but very little. Let the whole surface of the field be left very nearly level.

6. For the second hoeing, which should be very soon after the first, before the tops begin to leave, a similar course might be followed, except that broad, but rather low hills should be formed.

An acre so planted would have 4,840 hills, which would give, at only one quart to the hill, 151 bushels, worth, at 50 cents the bushel, $75,50; at 40 cents, $60,40; at 30 cents, $45,30; at 20 cents, $30,20; in which last case, it would hardly be a paying crop, but would give a profit, less or more, in each of the other cases.

Bone-Sickness in Cows.

Amherst, (Mass.) February 4, 1854.

L. Tucker, Esq.—In the Country Gentleman of the 2d instant, I perceive an inquiry by A. T. Tuttle, of Enfield, to which I deem it important that a correct answer should be given, both for the gratification of that gentleman, and also as affording information important to all dairy farmers on old lands.

It appears that Mr. T.'s cows have a morbid, sickly appetite for old bones; that those most affected with the disease, gradually lose their flesh and become poor; that, although they eat well, they appear dumpish, stiff in the joints, weak across the backs, so much so that they can hardly move. Mr. T. has graphically described the symptoms of a disease to which milch cows, on old, worn out pastures, are always liable; but he has failed to give information respecting his land—whether it is old, or recently cleared, and if old, whether it has been long used for dairy purposes, all of which is important to an intelligent answer to his inquiries.

In the absence of positive information, I shall presume that his lands have been long used for dairy purposes. Indeed the single fact that his cows are thus affected affords strong, presumptive evidence that his lands, both mowing and pastures, but more especially the latter, are dairy-worn. If so, the bone-sickness of his cows is easily explained. The remedy also may be easily pointed out; and although its application may be somewhat expensive, yet the expense incurred will afford a paying investment. The *cause* of the disease, its *cure* as now existing, and the *prevention* of recurrence, are the points claiming our attention.

It should be borne in mind, that the cow creates nothing. It is true also that the grass creates nothing. Certain inorganic substances exist in the soil, among which are *phosphate of lime*, *potash*, *soda*, *common salt*, *gypsum*, &c. The grass cannot create these substances for itself. It can only draw them from the soil. If they exist abundantly in the soil, as in most newly cleared lands, those sweet, nutricious grasses, most valued by the farmer, will grow luxuriantly; but if the soil do not contain them, except in very minute portions, as in old dairy farms, then those nutricious grasses will die out, and meagre, innutricious grasses will take their place. But it so happens, that the same substances which are essential to the sweet, nutricious grasses, constitute the essentials of milk. Of *phosphate of lime*, for instance, two ounces are required for the elaboration of each pail of milk in the mysterious organism of the cow; and several pounds are carried off in the bones of every calf sold from the farm. In process of time, this substance, which never exists but in small quantities, is exhausted. When no longer found in the soil, it cannot be in the grasses growing from that soil. But the cow cannot elaborate milk without it. Still there is in the organism of the cow an effort of nature to elaborate milk. The little phosphate contained in her food is all abstracted from her system in the composition of milk. None is left for that steady and constant renovation of her bones, which nature requires. Her bones are deprived of what is necessary to keep them in a sound, healthy, constantly renovated state. In other words, her bones are not fed with food convenient for them. *Phosphate of lime* is the proper food for bones, but this cow's bones have been cheated out of that bone-growing and bone renovating substance. She has the *bone-sickness.* The cause of this disease is explained in the Progressive Farmer, page 144, published by C. M. Saxton, 152 Fulton-st., New-York. Never was a disease more appropriately named. It is called *bone-sickness* for two reasons: 1st, because it is really a disease of the bones, these organs having fallen into an abnormal, sickly state; and 2dly, because it is manifested by an unnatural, and, in some cases, an almost rabid craving for bones, so that the cows afflicted with it, as Mr. T. says, will run for a bone, as if a dog were after them. So much for the *cause.*

For the *cure*, the best prescription is, to remove the cows to a good pasture, in which are plenty of clover and other sweet grasses, if it be summer; and to feed them, if it be winter, on good, well cured hay from richly manured land. Such food will supply the necessities of the milk-giving animal, and will be likely to restore health. If a change of pasture could not be had, it would be well to soil the cows on grass cut from well manured mowing. It would also be well to give them, as Mr. T. says he did, bone dust, ashes and salt. The latter, of course, should always be within the reach of cows. The two former would tend to mitigate, and might cure the disease. If the three were placed separately, the instinct of the animals would be the best possible guide, which to take and which to reject; for I suppose that no animal would eat bone-dust, or ashes, or salt even, unless led to it by a real want of its nature.

Now for the *prevention.* This has been already intimated; for what would cure, would in this case be likely to prevent a recurrence of the disease. I believe cows never have the bone-sickness, if fed on rich, sweet pasturage, or on hay from well manured mow lands. But what shall be done with our old pastures so poor that ten acres but keeps a cow, and that on grasses so innutricious that she needs after all bone-dust, ashes, salt and gypsum to keep her from sickness? Put these things on the land. A compost of 5 bushels of ashes unleached, 4 of oyster shell lime, 3 of cheap, agricultural salt, 2 of bone-dust and 1 of gypsum, to the acre, would prevent the *bone-sickness*, and more than pay the expense, in the increased productiveness of the land.

Now, Mr. Editor, if you approve of the foregoing, as an answer to Mr. T.'s inquiries, or if you believe it suggestive of anything that may be beneficial to the farmers of old dairy pastures, you are at liberty to use it as you please. Truly yours, J. A. NASH.

Farm Books—Good Suggestions.

There is one subject of interest to farmers, upon which, (though it be a little hackneyed,) I will even venture a few comments. This subject is none other than the oft proposed, yet seldom practiced, project of preparing, during the leisure time of winter, detailed plans for the year's campaign. The benefits of such practice have been often urged upon the attention of agriculturists; yet, to secure the adoption thereof, there will be needed "line upon line and precept upon precept." Plans upon which much thought has been expended, and which have been matured by reflection, possess as much superiority over the hastily concocted schemes, begotten by present necessity, as does ripened over the wind-fallen fruit.

All soils, whose fertility is not inexhaustable, require a judicious rotation of crops, in order to produce the most profit; that is, render to the tiller the largest quantum of pleasure, and increase the capacity for the production of food. Such a rotation requires reflection; a thorough system, and a forethought which shall reach a few years into the future. These requirements cannot be met by hurried calculations; and the plans hastily devised, will most frequently prove to be *ill* devised.

The necessity for forming calculations, when the time for *executing* them has arrived, leads straightway to confusion—greatly impairs the energy of execution; and makes the farmer a slave, with his work for a driver.

In view of these, and a variety of other considerations, I would say to you, friend farmer, procure a blank book of goodly size, in which, as a frontispiece, place an accurate map of your farm, marked off in lots and sections, regularly numbered and lettered. Thus fortified, devote the first page to lot no. 1; reflect upon its present condition, the manner of its cultivation, the character of the crops which it has produced, &c., &c., and after due deliberation, decide upon the crop which you wish it to bear. This done, study the capacities of the soil, and the requirements of the crop; bring to bear your whole fund of experience and stock of knowledge, otherwise acquired. Lay down a course of culture, including tillage, manuring and after cultivation, with all the concomitants: then calculate and affix the dates at which the various processes shall be performed. The next page you will use to note down the proceedings and remarks thereupon; and the next leave blank for the purpose of chronicling the results at the end of the season, together with what comments your observation may prompt. Thus proceed through the farm, until every lot and section shall have been provided for.

The next labor will be to make out a time table, allotting a fixed time to every operation of the season, and a labor to every day. This accomplished, you will possess as complete a plan as ever Bonaparte drew of a campaign. It is true that the allotments of the time table will, of necessity, be varied a little as the season progresses, on account of the weather and unforeseen interruptions. Nevertheless it is a valuable general guide. You will now own a book of reference which will be of invaluable service, not only for the present year, but for every future one; as it will contain plans, results, facts and deductions, which will form a safe basis for practical improvements, and a sure start point for progress. J. G. K. *Dryden, N. Y.*

Pennsylvania State Ag. Society.

The annual meeting was held at Harrisburgh, Jan. 17, when the following officers were elected:

President—FREDERICK WATTS.

Vice-Presidents—Isaac B. Baxter, Joseph R. Ingersoll, James Owen, Algernon S. Roberts, Robert T. Potts, Abraham R. McIlvaine, William Stavely, James Everhart, John Strohm, John P. Rutherford, Amos Knapp, Geo. W. Woodward, Augustus Lukenbaugh, William Jessup, H. N. McAllister, Jacob S. Haldeman. William Hieser, John S. Isett, John McFarland, John H. Ewing, John Murdock, William Martin, sr., William Waugh, William Bigler, James Miles.

Additional Members of the Executive Committee—John S. Evans, A. O. Hiester, Isaac G. M'Kinley, William Bell, Simon Cameron.

Corresponding Secretary—A. L. Elwyn.

Chemist and Geologist—S. S. Haldeman

Librarian—David Mumma, Jr.

Premiums were awarded on winter wheat, for 51½ bushels per acre on seven acres—for 158 bushels and 7 quarts corn per acre, and for 43⅛ bu. barley per acre.

The treasurer reported that the receipts for the past year exceeded the payments by $6,058,64, which, with the profits of the previous years, gives the Society a fund of $13,069,64.

Standard Weight of Grains.

MESSRS. EDITORS—Will you give a list of weights of grain, &c., as they are by law established. I see in the Cultivator for March last, page 97, a list of weights, in which Indian corn was set down at fifty-six pounds to the bushel. If that is the lawful weight for the bushel, I have been badly shaved, for I have sold sixty pounds for a bushel for some years. WM. F. POTTER.

The Standard Weight of Grains, according to the Revised Statutes of this state, is as follows:

	Legal weight.	*Ordinary weight.*
Wheat,	60 lbs.	55 to 65 lbs.
Rye.	56 "	56 to 56 "
Barley,	48 "	44 to 56 "
Oats,	32 "	28 to 44 "
Indian Corn,	56 "	50 to 62 "

We understand, however, that Indian corn is usually purchased in this market, and generally throughout the state, at the rate of *sixty* lbs. to the bushel, but that in the city of New-York the legal weight of 56 lbs. prevails among dealers. As the price in New-York for 56 lbs. regulates the price per bushel in all parts of the state, we can see no reason why the legal weight should not prevail throughout the state. The present custom, it appears to us, works great injustice to the farmer.

Culture of Buckwheat.

EDITORS COUNTRY GENTLEMAN—In my last I said something by way of calling your attention to the cultivation of buckwheat, which is getting to be, next to wheat, the most important crop in the state of New-York. I have deferred writing in the hope of obtaining some more digested information in relation to its culture, number of bushels per acre, amount raised in this town, &c. Not having in my possession any means of ascertaining these important facts, I must content myself with giving such general statements as come within my range of observation.

And first, by the Patent Office Report for 1851-2, you will see that the number of bushels grown in this state is 3,183,955, which is nearly as much as all the rest of the United States put together. Of this production, Albany county takes the lead, and Rensselaerville is the banner town. The average price per bushel is fifty cents for the last twenty years. The demand in general appears to be a little above the supply. The standard weight per bushel I understand has been established within a year or two at fifty pounds. You will perceive by this weight, that it is a more profitable grain to feed than oats, which weigh about 36 lbs. to the bushel. Many farmers adopt the practice of feeding the buckwheat and selling their oats in market.

The product per acre varies according to the quality of the soil, mode of culture, adaptedness of season, &c. It was formerly considered, compared with others, a somewhat uncertain crop, but the experience of some years past has satisfied me that it is not more uncertain than most other summer crops.

The time of sowing varies from about the 20th June to the 4th July. Some have sowed as early as the 10th June, and others as late as the 15th July. It sowed too early, it is liable to blast, and if sown too late, is liable to frost. The general principle appears to be to seed at about such a time as to bring the grain to such a state of maturity as not to be affected by the dry and parching winds that usually prevail before the autumnal equinox.

The mode of culture has varied considerable since my recollection. It was formerly the custom to reserve the poorest land for buckwheat. It was considered a great reproach to land to say it would produce "only buckwheat." The practice was to break up sward land early in the spring, and let it lie until about seeding time, and then cross-plow and seed. The practice now, among good farmers generally, is to sheep the fields intended for the crop as long as can be done before sowing, and plow but once.

I will here state, that I know of no section of country in which the business of farming is conducted more slovenly than it is among us. There are many exceptions to this general statement, but not enough to invalidate it as a general rule. The practice is altogether too general. The result must eventually prove ruinous. A young man will purchase a farm, and run in debt for a good share of the purchase money; grain bears a good price, and he is anxious to be out of debt. The temptation to *run* the land is exceedingly strong. Hence many keep no more stock than will eat up the coarse fodder in the course of the winter, and then plow and sow almost the entire farm to oats and buckwheat—oats one year and buckwheat the next. I know land that has been subjected to this system of skinning for the last fifteen years, and compared with others the yield may be said to be good. What this land would produce, if occasionally seeded with clover and a suitable rotation practiced, I am unable to say. Some of our farmers have raised good corn, good wheat, good rye, &c. I believe that to a farmer of this town, (a neighbor of mine,) has recently been awarded the first premium on wheat and corn, and the second on rye, by the New-York State Ag. Society. I am exceedingly gratified to be able to state that a more careful and enlightened system of husbandry has begun to prevail in this as well as in the adjoining towns.

It is a money crop; as soon as threshed it will bring the fifty cents, mostly at the barn. The time is very short; 72 days from sowing to threshing, may be considered as the shortest time. There is but very little difference, however, between early and late sowed, as to the time of ripening.

As to manure. No crop will feel manure of any kind, or in any state, so quick as buckwheat. Barnyard manure, whether green or rotted, ashes, lime, plaster, all seem to produce a wonderful effect when applied to this crop. Guano, so far as my knowledge extends, has not been tried, but I have no doubt that the effect would be a considerable per cent above that of any other manure, barn-yard manure not excepted.

The general impression formerly was that it was an exhausting crop. I have of late years been in the habit of observing pretty closely as to this opinion, and have recently conversed with some of our most intelligent and enterprising farmers in relation to this subject. The general opinion is that, compared with other crops, it is *not* exhausting. One gentleman in particular remarked to me recently, that it was his decided opinion that no crop we could grow, left the land in so good tilth as buckwheat. He remarked further as a reason, that the land was tilled at that season of the year when every green thing that was uprooted by the plow, was destroyed—that the growth of the grain was so rapid as wholly to smother and prevent the growth of grass or weeds of any description. I will remark here that in relation to my own experience, a good growth of buckwheat, followed by oats, and seeding heavily with clover, almost entirely eradicates the Canada thistle.

The remarks of your late correspondent in relation to raising corn after buckwheat, I am satisfied are entirely correct. I have never tried the experiment myself, and have never seen it tried in but two or three instances; and the results have uniformly been mainly as your correspondent describes as the result of his experiments. Some person or persons, years ago, must have tried these same experiments as your correspondent; for I have always heard that corn after buckwheat would be a failure. Why it is so, is a fit question, it appears to me, for our agricultural chemists to settle.

As to the yield per acre, I cannot say with accuracy. I will hazard, however, this general statement, that the average number of bushels per acre is double the number of bushels of wheat per acre throughout the state. If this statement should be found to be correct, then I see no reason why our land in this Helderberg region, is not worth as much per acre as any land in the state, the advantages to market only excepted. I must defer any further remarks until I get leisure, or until some of my townsmen, better qualified than myself, shall take it up. G. W. Durant *Rensselaerville, Feb.* 16, 1854.

Experiments with Guano, Superphosphates, &c.

L. Tucker, Esq.—I have read your journal from month to month, hoping that I should find some reliable facts in relation to the use of guano and phosphate of lime, but as yet the statements of different persons and journals are so conflicting as to leave me in the dark. My experience is as follows:

Last spring I purchased a few bags of guano and fifty pounds of lime. Early in May I transplanted some cabbage plants and put lime in the hill. Having a little left in the field, I sowed it on the grass near by, and never saw nor heard more of it afterwards. My cabbages were eaten off by the worms, and that ground applied to other purposes.

My corn ground was broken up the fall previous. In the spring forty loads of manure to the acre were spread and plowed in The guano was mixed with Plaster of Paris, one to two parts. My foreman was directed to put about one table spoonful in each hill, and cover two inches, and then plant the corn and cover the usual depth.

Six rows were selected, and treated as follows: First, two tea spoonfuls of guano; second, two tea spoonfuls of phosphate; third, guano and Paris; fourth, ashes; fifth, Paris; sixth, nothing. That part of the field planted first came up well, and the rest badly. This I attributed to there being but very little rain after the last was planted, and the guano was not dissolved; consequently the corn was burned. Of the six rows, all but that which had the guano in, came up well; and those were replanted, and after which all were treated alike.

Result.—The phosphate took the lead, and could be told a mile off, until it tasseled out, it being much larger and of a darker color than the rest. At harvest time each row was gathered separately. Result—No. 1, 125 lbs.--No. 2, 120—No. 3, 108—No. 4, 100—No. 5, 100—No. 6, 95. The phosphate was the dryest, and the worms had eaten the roots of Nos. 2, 3, 4, 5 and 6, badly.

Another small piece was planted with no other manure but a little phosphate in the hill, one row being left without any manure, which grew less vigorously, and was of a poorer quality when gathered. On the eleven rows I put four quarts of phosphate and harvested about fifteen bushels of ears, while on the other row I only got one bushel.

Conclusions.—Either of these manures may be used with profit, for corn. The phosphate is the best for corn, as it brings it forward early, but the guano is the most lasting, and more apt to burn the seed.

In July a piece of mowing land was clipped and turned over and sowed with buckwheat, with a light dressing of guano and Paris. A great crop was the result.

Plaster of Paris.—Two years ago I bought twenty acres of land, which had been cleared ten years; a part had been seeded and the rest was full of brakes, brush, and wild grass. On this last part I sowed 1,500 pounds of Paris. The cows did not trouble this part until the other had become very short, and then but little. In October I noticed that it was full of clover roots, except here and there a place where it had been passed over. Last spring the remainder was sowed in the same way, with a like result. During the summer the cows always fed the brushy part of the pasture first, that being full of white honeysuckle, while on the best part it was just putting forth its roots.

This piece of land is on a steep side-hill and cannot be tilled. I want to manure it, but am at loss to know whether to use the guano or the phosphate. From my own observation I should be led to use the guano, but from others, the phosphate. Here it is almost spring, and I am still undecided. Cannot some of your numerous readers come forward and help a poor doctor out of this quandary. Yours, L. W. Curtis. *Southbridge, Mass., Feb.* 8, 1854.

Cheap Cisterns.

Mr. Tucker—Within three years I have built four cisterns. The first held 25 barrels, and of course was a small one, for it was only an experiment, and cost me six dollars. Two men came along, and offered to leave me a good durable cistern if I would show them the spot and pay them six dollars, and it should hold 25 barrels. I showed them the place, and told them to go to work. They dug the hole larger at the top than bottom, and shaped somewhat like a stone crock, and plastered right on to the ground. It stood well, but the second winter was a tough one, and the cistern in rather an exposed place, and the water froze in it pretty hard. When the frost came out in the spring it caved in, and was lost entirely.

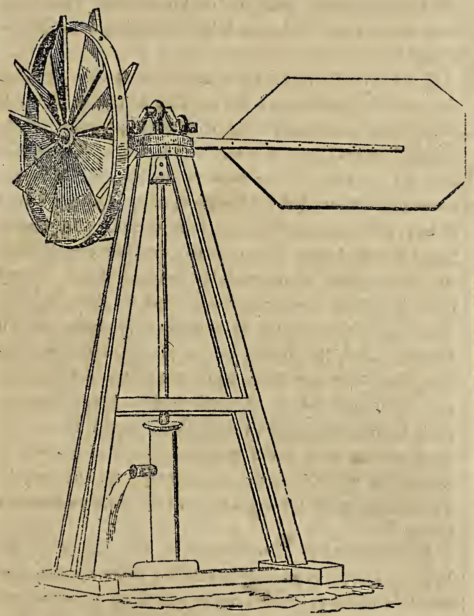
The last one I built myself, to hold 70 barrels, and in a less exposed place. I dug it shaped like the other, and laid the bottom over with brick, laid in water lime cement, and plastered over the brick. The sides I plastered back of the brick as fast as I laid them, but did not plaster on the brick, and set the brick up and down so that no cement came to the water but what was between the bricks and over the bottom. I thus laid one layer above another until I came to the top of the hole; then laid four joists across, and sound oak plank upon them, leaving an eighteen inch square hole on one side, and inserted a curb—then banked up high with dirt around the curb and over the plank.

Now, sir, let me know through your invaluable paper a better or more durable mode of building a cistern. James H. Mattison. *Oberlin, Ohio.*

Wind Power for Farm Purposes.

A correspondent in Connecticut, wishes to avail himself of some kind of stationary power for the various purposes of the farm, and having no other at hand, would like to know if wind may not be used to advantage; the mode of constructing the apparatus; how great a power may be obtained; and the cost of erection.

This subject is one eminently deserving inquiry, and is worthy of the attention of every farmer, for no other power may be so universally used. Water is at the command of a very few only; steam is costly and requires skilful management; but wind is every where accessible, wind-privileges cost nothing, and a machine through which its force may be exerted can be made at quite a moderate expense. It cannot be used so well for the heavier operations of thrashing grain or sawing wood; but may be applied to great advantage in cutting straw, slicing roots, churning, turning grindstone, and especially to pumping water, all of which, although laborious, require but a moderate and continued force. It has succeeded well for these purposes in actual practice, and there need be no difficulty in any case if properly applied.



The accompanying figure represents a contrivance for the purpose of working a pump. It consists of a simple pyramidal frame, made of four pieces of timber, the top of which is furnished with a circular piece of strong, very thick plank, made of the hardest wood, and pinned fast to the upper end of the timber; or still better, small tenons of these timbers should pass through this circular plank. It may be advisable to face this plank with a cast iron or thick sheet iron plate. A large hole is made through the center, for the passage of the pump-rod, and for securing another strong circular piece of wood above it The upper piece is made so as to turn freely in a horizontal direction, and is secured to the lower by means of several iron plates or bars, which pass down and clasp the under side of the lower or fixed wooden circle. To the movable circle a crank is attached, as the figure represents; and to the outer end of this crank the windmill is fixed. On the opposite side of the movable circle is fastened a vane large enough to keep the windmill always toward the wind. The crank will work the pump-rod, no matter in what direction the wind may blow, and the machine thus regulates itself. It is scarcely needful to remark that the faces of the circles should be kept greased, that the vane may turn freely.

The power of such a contrivance as this will as a matter of course depend entirely on the size of the wheel and the strength of the wind. The pressure of what is usually termed a "brisk wind," varies from one to three pounds on a square foot; and as a general or average estimate, a wheel four feet in diameter with such a wind, will perform the labor of a man. Even with a light breeze, the pump will be set in motion, and will continue to raise water at a moderate rate. The cost of such a contrivance will vary from twenty to fifty dollars, according to its size and the perfection of the work.

In all windmills, it is important that the sails or fans have the right degree of inclination to the direction of the wind. If they were to remain *motionless*, the angle would be different from that needed in actual use. They should more nearly *face* the wind; and as the ends of the sails sweep round through a greater distance and faster, these extremities should present a flatter surface than the parts nearer the center, (the sails curving for this purpose,) in all windmills of much size. Scientific mechanics give the following as the proper angle of inclination to the line of the wind's motion; 68 degrees for the part nearest the center, 72 for the middle, and 83 for the tips. This may be of use to those who wish to get as much work out of the wind as they can.

Unloaded windmills, or those which perform no work, move faster at the extremities than the wind itself, in consequence of its pressure on the inner portions of the sails. In order to work most effectively, the work put upon them should run them about one-third slower, or with the ends about equal to the wind's motion.

A wind which blows 25 miles an hour, and presses three pounds on a square foot, is about as strong as it is safe to run a windmill in; and we are not aware of any contrivance to regulate them in stronger gales. But we would propose for this purpose to have the sails turn on pivots at their ends, and a little out of their centers. A spring would preserve the proper angle of inclination, but a high wind would press upon these springs, turning the sails more edgewise towards its direction, and lessening its power upon them. When intended for in-door work, it should be placed on the *roof* of the building, so as to get the wind from every direction without impediment, and that the working rod may run directly down and perform the necessary work.

We have already spoken of the peculiar fitness of wind for pumping water, which is in the great majority of instances obtained from wells, and to several other purposes where moderate force is needed. There is no doubt however, that by means of a heavy fly-wheel, a power might be accumulated sufficient for cutting wood with a circular saw, which might be attended by a single hand, and during strong winds, save the severe labor of the hand-saw.

On a future occasion we intend to furnish a simpler, cheaper, and perhaps better, but less compact plan for wind-power.

Laborer's Cottages.

Eds. Co. Gent. and Cult.—Being about to undertake a small farm of 16 acres, and needing a hired man, I seized with avidity your idea of a small cottage for $250. But a carpenter tells me that nothing but a *shantee* can be built for less than double that amount. As I am ignorant in this matter, I am very desirous for your directions as to size, &c., and will be greatly obliged by such information in your next number as would enable me to erect a dwelling for my man and his family. Cit.

Carpenters, who have been accustomed to build "gentlemen's" houses only, can hardly appreciate the simpler and cheaper wants of such men as labor by the day or month. A costly edifice for such as these, would be what they do not want, and what would be unprofitable for their employers. We speak from actual personal experience when we say that houses *better* than such men generally are able to rent or provide for themselves, have been erected for a sum considerably less than $250, containing three rooms below and one above stairs. We will here give a very simple detail of the mode of erection, leaving for a future occasion plans and more particular directions.

The frame consisted of heavy scantling plates, supported by perpendicular plank fastened with very large nails. The plank should be about an inch and a half thick, every piece being about of equal width, fitting closely at the edges, but neither planed nor matched. After the building is enclosed with these vertical pieces of plank, vertical strips of inch board about three inches wide are nailed over the joints between the plank, forming a neat battened exterior. Similar strips are then nailed on inside, and on these the lathing is placed for plastering. In other respects the house is finished in the ordinary way. The outside of the house being left rough or unplaned, receives two coats of the best lime whitewash, the color of which may be softened by a small portion of venetian red, umber, or ochre; and a repetition of a coat once in two years will keep up the good appearance, and preserve the wood from decay nearly as well as paint. Such a house will be warmer and more durable than the common studded frame and horizontal clap-boarding. We have actually built a neat cottage in this way, with four rooms, for $150, when lumber was rather cheap. It consisted of a central portion 15 feet square, with a chamber overhead, and a wing on each side 11 feet square for kitchen and bed-room, the wings bracing the main building, and thus needing but little timber for the frame. The eaves projected a foot, and were supported by neat brackets. The windows had projecting caps or hoods. Planted around with roses and other shrubbery, and flanked with evergreens, it presented a very neat and attractive appearance.

Liquid Manure—Hens—Blackberries.

Eds. Country Gentleman—Of the few experiments I have been able to make with manures, I find none more successful, taking expense, saving of labor and results into view, than those which can be used in a liquid state. Its effect is very good on growing corn, either sprinkled all over or poured on to the roots. The kind I used was from the hen-house, about a quart to a tub of water. Almost any kind, in a liquid state, does well on fruit trees, poured on the ground round the trunk, or more effectually into a trench near the extremity of the roots; but with so limited an experience it becomes me better to recommend experiments to others than to go further into details myself, and I hope some of your readers will follow out these hints the coming season, if they are deemed of sufficient consequence, and let us know what kinds are best, what proportions, and the best time of application, &c.

Hens.—With hens I have had good success. I keep the common barn-yard fowl. The first year, an average of seven or eight hens, with their progeny, yielded one hundred and five and one half dozen eggs, besides 42 chickens, losing none of the latter. The eggs alone more than paid for the feed, most of which I had to buy, not raising any corn that season. They have layed freely during the past cold weather, and I think the true secret of successfully keeping hens, of any kind, is to feed them regularly, and *let them be comfortable*, having access to a warm dry cellar, at all seasons. Let the roosts be so placed, and the nests also, that they can walk from one to the other, or up and down, and not be obliged to fly. Have due regard to cleanliness and ventilation; supply them with fresh water; give them pounded shells of oysters, or something of this nature, constantly; let the food be varied frequently; and keep but few, perhaps from six to ten.

Blackberries.—In a ramble last fall with the boys, in search of autumn fruits, we came upon a cluster of blackberry bushes, some two dozen or more, and I may say they were of the *tallest kind*. The summer's growth measured from *ten to twelve and a half feet in height* from the surface of the ground; the bearing ones equally tall, having very good fruit. One of the bushes which I afterwards transplanted, would pass for a respectable little tree, being about an inch in diameter. S. B. Sumner. *Grantville, Norfolk co., Mass., Feb.* 9, 1854.

Good Pigs.—Mr. A. Converse, of Butternutts, Otsego co., recently slaughtered two pigs a few days over nine months old, which weighed 650 lbs.—one of them weighed 348 lbs.

United States Ag. Society.

The annual meeting of this society commenced its session at Washington on the 22d of February; but owing to the unprecedented storm which had delayed the arrival of delegates, no business was transacted on the first day.

Thursday, Feb. 23.

The Society was called to order at half-past ten o'clock—Hon. Marshall P. Wilder, President, in the chair—W. S. King, Recording Secretary. About 100 members were present from 19 states.

The President delivered his annual address, which was referred to the executive committee for publication.

On motion of Col. C. B. Calvert, of Maryland, business committees of three were appointed, to whom were referred the various subjects brought before the meeting.

Mr. Dederick, of Albnny, New-York, moved that a committee of three members on the subject of Agricultural Machinery be appointed, and to report to the Society. He spoke at some length in explanation of the great importance to the agricultural interest of being placed in possession of the best implements for the prosecution of their labors. The motion prevailed, and Messrs. Dederick, Musgrave, of Ohio, and Mapes were appointed.

Mr. Denton Offutt, of Lexington, Kentucky, moved the appointment of a committee on Animal Physiology, and the general improvement in all respects of domestic animals. It was a subject of high interest and importance.

Mr. Calvert testified to the influence, to him wonderful, whatever it was in itself, of Mr. Offutt's power over at least one animal, the horse. He had been an eye witness to a scene at the Maryland State Fair, which may be mesmerism, or magnetism, or what not; but Mr. Offutt reduced almost instantaneously a horse noted for vicious propensities, to gentleness and tractability. He warmly seconded the motion of Mr. Offutt.

An invitation from Mr. Glover to the society to visit his collection of models of fruits at the Patent Office was then read. The invitation was accepted, and a committee consisting of Messrs. Worthington, Berckman, Warder, Munn and Richards, was appointed to report upon the same.

The President then offered for consideration the contents of two communications confidentially committed to him. One was from Mr. Joel Hitchcock, of St. Lawrence county, New-York, on the subject of a remedy for the potato rot; the other on the subject of a remedy for the devastations of the *curculio* on fruits, by some person whose name did not transpire. The object of the parties seemed to be to get their remedies to be tested by the society through committees of the same, and reports made at the meeting of next year.

The question on the reference of these proposals gave rise to a very animated debate, in which views of very opposite character in respect to the probable value of the alleged discoveries were elicited. They were finally, after a strenuous opposition, referred to the Executive Committee, to test the modes proposed and to report to the next annual meeting of this society.

A committee was appointed to petition Congress to make some arrangement with the government of Peru, by which Guano might be procured at reduced prices.

A communication from Mr. James Pederson, on the subject of introducing the Alpaca or Peruvian sheep nto the United States, was then read by Mr. Munn, of New-York.

At the evening session Professor Mapes, exhibited and explained an improved sub-soil plow invented by himself.

Friday, Feb. 24.

In the absence of the President Hon. John A. King of New-York, was called to the chair, when Professor Fox, of Michigan, delivered an address on the best means of extending Agricultural Education in the United States, which excited considerable discussion, during which the President of the United States rose, and, addressing the chair, thanked him for the intelligence that had been furnished him of the session of the society; spoke in terms of compliment and approval of so much of Prof. Fox's address as he had heard; acknowledged the high interest and importance of the object of the society, and of the questions before it; and said that, while he should be most happy to remain during the interesting proceedings yet to be had, other duties demanded his retirement, and compelled him to bid them good morning.

The question of petitioning Congress to purchase Mount Vernon, for the purpose of making it the site of a national Experimental Farm was discussed by Merssrs. Tayloe, Calvert, Earll, Brown, King and others without coming to any definite conclusion. At the evening session, on motion of Mr. Earll, the memorial of the Maryland State Agricultural Society, petitioning Congress to purchase Mount Vernon for an agricultural school, was taken up and read.

Mr. French, of Massachusetts, advocated the adoption of the resolution. It was carried, and Messrs. Blair, of Maryland, Earl, Brown, King, of New York, and French, of Massachusetts, were appointed a committee to present it to Congress.

Mr. Browne, of Pennsylvania, made a report from the committee appointed to investigate Mr. Denton Offutt's system of animal physiology.

Mr. Robbins of Ohio, presented a memorial from citizens of Ohio asking the countenance and patronrge of the society to a cattle exhibition to be held in September next, in Springfield, Clark county, Ohio, which was referred to the Executive Committee.

Hon. Mr, Benson presented a resolution, in behalf of Mr. Meacham, of Vermont, that a National Exhibition of sheep be held in the course of the year in the State of Vermont, at such time and place as the Agricultural Society of Vermont shall appoint. Carried.

Mr. Finch, of New-York, proposed that a monument should be erected to the memory of John S. Skinner, the pioneer of American agricultural editors.

Mr. Browne, of Pennsylvania, supported the proposed tribute.

A resolution, which recommended a stone in the National Washington Monument, with a suitable inscription, was carried.

Mr. Causin, from the committee to examine and audit the accounts of the Treasurer, reported, complimented their accuracy, and stated a balance of $3,005 in favor of the society. Of this upwards of one thousand dollars have been contributed at the present meeting.

Mr. Benson read a bill now before a committee of Congress creating an Agricultural Bureau.

Mr. Calvert recommended the creation of an Agricultural Department, on an equal footing with the other Departments, the Secretary to have a seat in the Cabinet.

Mr. King, of New-York, moved that the society adhere to the resolution of the last year, asking for a full department.

We do not find it stated whether this, or any other resolution on the subject, was adopted.

Addresses were delivered by Dr. Warder, on the Culture of the Grape—by B. P. Poore, on the History of Agriculture, and by Dr. Eddy, on Bees and Bee Culture.

OFFICERS FOR THE ENSUING YEAR.

The officers of the United States Agricultural Society for 1854 are:

President—Marshall P. Wilder, of Mass.

Vice-Presidents—19, (one from each State represented.)

Executive Committee—C. B. Calvert, John A. King, A. L. Elwyn, J. D. Weston, B. P. Poore, A. Watts, John Jones, W. S. King.

Cor. and Rec. Secretary—W. S. King, of Boston.

Treasurer—William Selden, of Washington.

The Culture of Indian Corn,

AND THE WAY TO MAKE MANURE FOR IT.

Our correspondent, Hon. J. W. Colburne, of Springfield, (Vt.) received the prizes of his State and County Ag. Societies for the best field of Indian Corn, the last year. The field contained seven and a half acres, and the product averaged *one hundred and five bushels* (56 lbs. to the bushel) per acre. The cobs weighed 12 lbs. per bushel. Mr. C. has sent us the statement which he furnished the Societies, of the manner in which this crop was grown. It is particularly interesting, showing as it does, how he made sufficient manure to enable him to apply it in such abundance to this field. We know that it will be doubted by some whether he acted wisely in manuring so heavily; but if all our farmers will follow his example in the measures he took to increase the amount of his manure, they will have little occasion to send abroad for artificial fertilizers. Mr. Colburne says:—

The soil of this field is alluvion, and was broken up to the depth of 6 inches, after a coating of manure of 40 loads to each acre, spread broadcast, had been applied in the spring of 1852. The plow used was the Eagle C., turning a flat furrow, and performing its work admirably; and here premit me to digress a moment from the subject, while I say, (and I speak from my own experience,) that in my judgment, there are no plows in existence, taking into account the ease of draft, the depth and thoroughness of their work, that are so accurately and well adapted to an improved cultivation, as the various kinds of the deep tillers of the Eagle Class, manufactured by Ruggles, Nourse & Mason.

This field was planted with corn which soon came up, and the prospects for a good crop were flattering; but as often happens on sward land, the copper head grub or cut worm, made its appearance, and destroyed most of the first, and considerable portion of the 2d planting. I however, harvestsd about 50 bushels of corn to the acre, and a large quantity of pumpkins.

Being desirous to obtain an extra crop of corn from this field before seeding to grass, in the spring of 1853, I applied, broadcast, 50 ox-cart loads of manure to each acre, making 90 loads to each acre, in the two years. The loads were large, side boards upon the cart body, and would contain 35 bushels potato measure. The manure was in different stages of decomposition; a part of it was from hog yard, fine and rotten, some of it a compost heap, made up of horse and chip manure, leached ashes, rich loam from the ditches on road sides, broken bones, the scrapings of the poultry house, &c., often shoveled over during the summer season, kept dishing upon the tops, on which were daily thrown all the enriching wash from the kitchen and chambers of the dwelling. That portion from hog yard, was made up of turfs from road sides, rich loam, from under stable floors, decaying leaves from the forests, brakes from the pasture, green weeds and thistles, potato vines, the cobs of 800 bushels corn, and all other refuse matter that came to hand.—There were 183 loads of strong manure from these two sources, and after paying for all the labor of putting in material and working it over, the actual value of it when taken out and applied to the soil, left a large balance towards defraying the expense of raising and fattening the swine that helped to make and work it over. I would here remark that I have no swamp or muck bed upon my farm; I have no such mine of wealth to resort to, to swell the manure heaps and enrich my lands; if I had, I believe I should know how to appreciate and use it, but such means as I have at command, I endevor to make the most of.

The balance of the manure applied to this field of 7 1-2 acres, was made in, and taken out of cattle and sheep yards, without adding any material except refuse straw which was used freely enough to keep the yards warm and dry, and to absorb the liquid portion of the droppings, horse and cattle stables kept bedded so as to take up and absorb the urine, and the coarse part of corn fodder adds very much to yard manure. This portion was rather coarse, and was applied in its green state, which necessarily required the labor of one man when the plow was running, to brush it into the furrow, that no obstruction to a thorough plowing should exist. It was plowed 10 inches deep, 4 inches under the decayed sward, with a short mould-board plow, breaking and pulverising the soil and mixing the manure with it, which with a thorough after harrowing, left one of the best prepared fields for Indian Corn, that could possibly be obtained.

The planting took place on the 16th of May, with the corn planter, dropping plaster and ashes with the seed, about 6 bushels to the acre, the rows north and south, 4 feet distance, and hills 2 feet. At the first hoeing the stalks we designed to be reduced to 3 in each hill, but in many hills 4 were left. A mixture of ashes and plaster, a single handful to each hill, was then applied, and after the second hoeing, plaster alone, a table spoonful to each hill; the 3d hoeing soon followed, all done with care and neatness, using the cultivator and elevating the earth but slightly around the hills.

The manuring of the year previous, together with the decayed sward, seemed to bring the young corn forward with astonishing rapidity in its earlier stages, and the last manuring with the deep plowing and thorough culture told with powerful effect in maturing the crop.

It was cut up at the bottom in Sept., as the husks began to assume a dry appearance, each man taking 3 rows and setting around every third hill of the center row, which was left standing to support the shook, a man following with rye-straw, putting a strong band around the shook above the ears; after standing three weeks the husking commenced and was finished on the 19th of October; making no assortment, as it was all dry and sound.

The sample shown you is no better than the whole will average. It is a mixture of the 8 and 12 rowed varieties, with a small cob and deep flat kernel; and is now grown 8, 10 and 12 rows of kernels upon the cobs, which weigh only 12 lbs. after shelling off 56 lbs. of the kernel. By this method of harvesting it will be seen that the shuck or fodder is not separated; it is set up in shooks of convenient size to be put on to a cart with a hay fork, or it can be husked in the field if the weather is good and the fodder drawn in afterwards. It cures well and is worth more for winter forage than by any other process I have ever tried.

In conclusion, gentlemen, permit me to say, that in my experience of growing this crop for the last 25 years, I cannot resist the conviction that with our soil and climate and the best of preparation and cultivation, not much over 100 bushels to the acre can possibly be obtained. There is no better soil for the production of this valuable grain than the alluvial bottom lands bordering ubon the Connecticut River, and yet when I have done my best on these lands, I have oftener fallen short that gone over 100 bushels to the acre. This is a great yield and requires extraordinary effort, with a very favorable season to obtain it. Whenever I see the enormous yield of 130 to 150 bushels to the acre, I cannot but entertain the opinion, that some inaccuracy in the measurement has been made, though perhaps not designedly. I know these remarks are gratuitous and may be deemed impertinent, but they are not designed to particularize or to personalise; they only allude in general terms, to what is thought to be erroneous. J. W. Colburne. *Springfield, Dec.* 31, 1853.

* * *

Large Crop of Onions.—The statement is going the rounds that a Mr. Hammond, of Grand Rapids, Mich., raised, the last season, on one rod of ground, 13½ bushels of onions. This is at the rate of 2,160 bushels per acre.

Bone Disease.

Mr. Tucker—I have read the inquiry of A. T. Tuttle of Enfield, and the answer of Prof. Nash, and the information given is of great importance to farmers on old dairy-worn farms.

The cause of the disease, as the symptoms are described, is confirmed by the observation of farmers in this section; for how can it be otherwise, when the cow takes from the soil, 50 or 60 pounds of bone earth, in her milk and the annual calf, besides the supply for her own frame.

The cure, all things considered, the most profitable, is to dry off the cows immediately, and give them a chance to recruit; then turn into beef. If milking be continued when so reduced as scarcely able to walk about, the cows will not pay the cost of bone meal and extra keeping, as it will take a much longer time, where a change cannot conveniently be made in pasture and winter keeping.

I think soiling sickly cows for the dairy, would certainly be very unprofitable for the farmer, on land where this disease prevails.

The preventive of Prof. Nash would be an effective but rather expensive one on large pastures of cheap worn out land, where it would be impracticable to use the plow; but so much depends on the cost of materials, the distance to the market where they can be obtained, we should try to manage if possible, and it certainly is, to prevent the disease.

I believe the best way consists in changing stock often, and at some distance, where the farming lands are comparatively new; and to keep only cows enough to make dairy for family use, and to keep sheep in their place, and go to raising mutton and wool, for that is good business: and I know sheep will do well on land where this disease is common with cows.

The bone disease has been in this section for years, and is now on different farms in all stages. I do not know of an instance where cows have died with it, unless killed to be put out of misery. I have assisted in skinning and examined the bones of several cows, when I have taken the strongest bones in the carcass, and could break them as easy between the thumb and finger of each hand, as I could a piece of common window glass. Yours, Porter Walbridge. *Tolland, Ct., Feb'y* 27, 1854.

Best Feed for Milch Cows.

Messrs. Editors—One of your subscribers says he would be glad to know the best plan of feeding milch cows in fall and winter. In the remarks you make on the above, you say that you hope some who have had experience will give you more particular and accurate details, as but little has been ever given to the public on this subject. Willing to contribute my mite to the interest of your Cultivator, I send you my experience in (not making milk) but in feeding cows, so as to get the greatest quantities of good milk at the least cost, for this is the great object in view at present. Before the blight came on the potato, perhaps this tuber was the most profitable to feed out to cows to get a large quantity of milk, but not of good quality. I knew a man that kept 30 or 40 cows for raising milk for market. He used to raise from three to four thousand bushels of potatoes a year before the blight, to feed to his cows; but it would not do to feed potatoes at present prices.

In answer to the inquiry, I beg leave to present the following, which by experience I have found to give the greatest quantity and best quality of milk:

For every cow, boil half a bushel of turneps; when boiled soft, add 4 quarts of bran, mix well, and let it stand till cool. Give your cow a boiled mess like this once a day, and you will find your milk increase, and the milk does not taste of the turneps as it does when they are fed raw. By adding the bran while the turneps are hot, the bran swells, and you get the full good of it. This I have found to be the best and cheapest way to get the greatest quantity of good milk. C. G. *Swampscott, Mass., Feb.* 15, 1854.

Good Heifers.

Messrs. Editors—I have two heifers, from the milk of which has been made, during three months ending the 23d of Feb. last, 254 lbs. 9 oz. butter. "Abby Folsum," the eldest, will be 4 years old next April, and "Victoria" was 3 years old last Sept. As near as their pedigree can be traced, they are ⅞ Durham. Their sire is a full blood Durham, and was bred by Mr. Haswell, of Hoosick, N. Y., and purchased of him by Mr. Eli Wright, of this town, some five or six years since. He has recently been sold to a gentleman in Petersham.

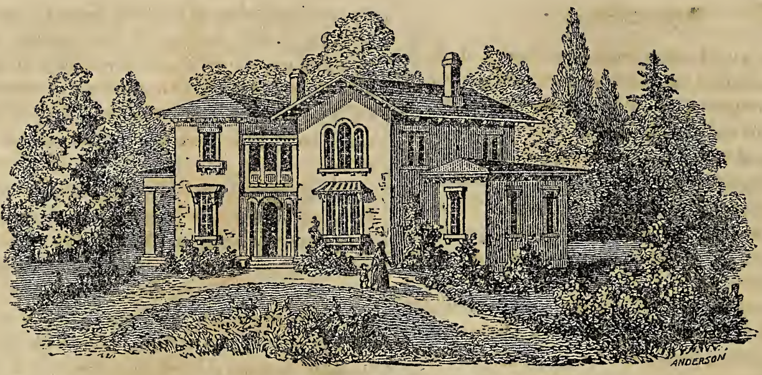
The milk which yielded the above named butter, was placed in a pantry contiguous to the kitchen, and the door separating them kept open most of the time; consequently the milk was warmed most of the time at a temperature far above the freezing point, and but a few pans were frozen during the coldest days. The cows were fed on the best of second crop hay, grown on the intervale of Deerfield river, and soil of a sandy loam. The following are the expenses of keeping and the profits arising therefrom:

Cows, to meal-bin and hay-mow,		*Dr.*
To 24¼ bushels of meal consumed, consisting of two parts corn to three of oats,............	$16 22	
" keeping on hay 92 days,.................	26 13	
" interest on cows at $50 each,...........	1 50	$43 85
Contra,		*Cr.*
By 37 lbs. butter sold at 22c.,........	$8 14	
" 217 9-16 lbs. do. do. 20c.,................	43 51	
" 140 qts. new milk given to calves first 10 days after cows came in, at 2c. per qt.,	2 80	
" new milk used in family, 117 qts., at 2c.,..	2 34	
" skimmed milk fed to calves and pigs,.....	10 00	$66 79

Giving a balance in favor of cows of $22,94

One dropped her calf on the 22d and the other on the 24th of Nov. last. James Childs. *Deerfield, Mass., March* 2, 1854.

Documentary History.—We have failed to acknowledge the receipt of a copy of this work in December last, from Hon. H. S. Randall, late Secretary of State, for which he will accept our thanks.



FARM HOUSE IN THE ITALIAN STYLE.

A Farm House in the Italian Style.

The late A. J. Downing, so remarkable for his common sense and accurate taste in architecture, fell into an error on the character of the dwellings that farmers should provide for themselves. He classed all farmers promiscuously in one mass, as men who had but little to do with beauty or neatness, and as a consequence most of his farm-house designs indicate a degree of homely simplicity, often bordering very closely on the uncouth and awkward. Now, it happens that there is as much diversity in the characters, tastes, and opinions of farmers, as in the motly inhabitants of the far-famed Pulo-Penang of the east. Some farmers, it is true, are as crude, almost, as a horse-thistle, while others are as refined as Count d' Orsay himself. The absurdity of placing three-fourths of all the American people together, consisting of Yankees, Englishmen, Irishmen, Swiss, Germans, French, Dutch and Spanish, with interminable intermixtures of all, and with all grades of cultivation, poetry of thought, and the genius of hard-scrabble and rough-and-tumble, is sufficiently obvious.

Some farmers, "whose only music is the dollar's chink," care for nothing in the shape of rural comfort and taste, and would look upon a bed of flowers as far less ornamental than a sack of grain. We actually heard a driving young farmer declare, after viewing a beautiful garden, that a heavy crop of wheat was the handsomest sight in nature for him! But all are not so; and although the thirst for the tasteful is often undefined and developed in an occasional queer-looking building, yet we would rather see a blunder of this sort sometimes than a cheerless desert. Even two stiff rows of trees in front of a dwelling, look better than a bleak unsheltered mansion. If the thirst only exists, it will not be satisfied with such crudities as these, but will soon lead on to better objects for its satisfaction. To assist this worthy purpose, we shall occasionally furnish some tangible hints on building and planting, in the shape of distinct examples.

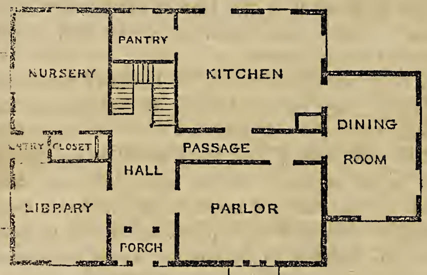


Fig. 1.

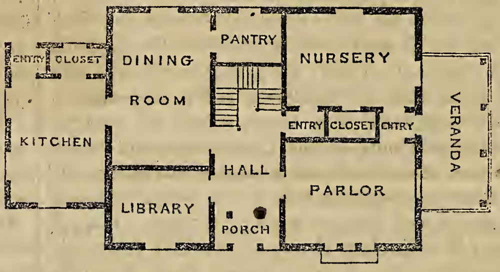


Fig. 2.

The design at the head of this article is intended to exhibit a dwelling expressive of an air of modest and refined neatness, free from any bold or prominent peculiarity of architecture. Its general air is that of the Italian style, presenting the varied outline and freedom from stiffness for which this mode of building is distinguished, but without a rigid adherence to architectural rules. It is intended for an intellectual family in moderate or comfortable circumstances, and either as a farm or suburban residence. Without any attempt at costly ornament, it aims to give a tasteful exterior. A profusion of decoration, or as commonly termed "gingerbread work," is one of the most common faults in our newer country dwellings, much oftener showing a want of architectural taste than its presence. The simple elegance of a statue, with the plainest drapery, is infinitely more pleasing than if bedizzened with flashy ornaments, ribbons, poppies, and peacock feathers; and more taste may be shown in the form and proportions of a log dwelling, than Horace Walpole exhibited by

The Norway Fir.

This tree is certainly one of the finest of all the fir tribe, and all things considered, the most valuable. As it is a native of the colder parts of Europe, it is perfectly hardy in any portion of the northern states; it grows with great rapidity, often three or four feet in a year, in ordinary soil, and with no care whatever. It will attain a large size in a very short time, and far outstrips the balsam fir, white spruce, silver fir and other evergreens. It forms one of the finest lawn trees, when standing out alone, and sweeping the ground with its graceful branches; and a dense screen against wintry winds may be made of a plantation of this tree in a very few years.

Like many other trees, the Norway spruce is disposed to run into varieties, which are shown by the different appearances of the foliage. On some trees, the foliage is sparing, erect and rigid; on others, it is profuse, drooping and luxuriant. A mixture of both sorts will give greater variety in a plantation; but in selecting in the nursery, the drooping specimens will always be preferred. We sometimes see rare specimens. of surpassing grace and luxuriance, of which we furnish a fine portrait, which accompanies this article, of a tree standing on the grounds of Humphry Howland, Esq., of Aurora, N. Y.

his splendid erection at Strawberry Hill, which was in fact only a glittering jumble.

The plan (fig. 1) needs but little explanation. The library may be devoted to books, papers, objects of natural history, optical instruments, &c., and would form an interesting resort for the younger members of the family, or for the pursuit of their home studies; or it might be occupied as a business office. We have given modifications of the plan in the accompanying figures. In fig. 1, the nursery and library both open (through a small entry, so as to exclude the direct cold air of winter,) upon the veranda, that the children and young people may enjoy its full benefit. The dining-room, entered through the side passage, is freely accessible from both kitchen and parlor, and may be used as a snug, retired and comfortable living-room. For those who prefer a parlor opening on the veranda, the second plan (fig. 2) is given, the dining-room and veranda of fig. 1 being made to change places with each other, so that the nursery and parlor both open, by means of an entry upon the veranda, this mode of access through an entry being more secure from cold, and better adapted to a house of this character than windows opening as doors. If desired, the veranda may be replaced with two bed-rooms, for a larger or increasing family, a very common circumstance.

The plan of the second floor is not given, as it very nearly resembles, in its general form, the plan below. It may be made into six bed-rooms, by dividing the space over the kitchen in the first plan. and over the dining-room in the second, leaving the necessary passages for this purpose. Those who lodge hired men may prefer a separate stairway to the two back rooms, in which case narrow stairs may be placed at one side of the kitchen, directly under which the cellar-stairway may descend. The dairy occupies a separate room in the cellar, with a free access to pure fresh air. The roof over the hall only rises to the eaves of the side walls, thus avoiding the usual leakages of re-entering angles in roofs. As it is, however, more nearly horizontal than the rest, it should be covered with a metalic coating of the same color as the rest of the roof.

This house, built on a moderate scale, or with the four larger rooms about 15 by 17 feet, and ten feet high, perfectly plain in its finish, may be completed for about eighteen hundred dollars. With larger rooms, more massive and durable walls, and higher finish, it might be made to cost three thousand to three thousand five hundred.

Fruit on "Black Swamp" Land.

MR. TUCKER—Will you or some of your correspondents inform me what varieties of the different kinds of fruit are best adapted to what we in Ohio term black swamp land? or such as the black swamp and land bordering on it, in the north part of the state? which perhaps is not excelled in fertility by any land in Ohio or America. Horticultural writers say that one variety will suit one kind of soil, and another another kind. Now I wish to know what varieties are best adapted to the sort of soil I have mentioned, and what would be the most profitable to raise on such a soil, for the New-York market?

The land I have purchased is sufficiently dry for cultivation. JAMES JENKINS. *Port Clinton, Ohio.*

As we are not furnished with a distinct statement of the chief or larger constituents of the soil in question, we cannot give any hints that will be of much value. If the soil abounds largely in vegetable mold, and possesses a high character for fertility, we could recommend only the most productive and moderate growing varieties of the apple; and pears on quince stocks. The following sorts would probably succeed best:—Bullock's Pippin, (which mostly fails in New-York.) Jonathan, Swaar, Newtown Pippin (with lime or ashes added, if necessary,) Esopus Spitzenburgh, Red Canada, Rambo, Belmont, and other varieties of the apple, which improve in flavor on a fertile soil, and not Baldwin, Rhode Island Greening, &c., where the flavor deteriorates on too rich a locality. Among the best market pears, for quince stocks, the Winkfield, Lawrence, Easter Beurré, Beurré Diel, Passe Colmar, Glout Morceau, &c., will be best among the late autumn sorts, which will bear distant transportation.

If the soil alluded to is sufficiently compact and firm, to bear good crops of wheat, corn, potatoes, and other similar farm products, it will doubtless produce the above named fruits; but if of a more spongy or peaty nature, their success will be of a very doubtful nature, while at the same time such localities will be very liable to frost. As a general thing, pears on quince stocks will grow better on peaty soils than any other kinds of fruit.

Soils for Apples.

1st. On what kind of soil will the Swaar apple succeed best? 2d. On what do the Esopus Spitzenburg? 3d. On what do the Roxbury Russet?

4th. Is the Melon apple equal to any of the above varieties for the desert or domestic use—is it productive—is the fruit fair or imperfect?

My reason for making the above inquiries is, the soil of my orchard varies from a dry gravely soil to a strong clay loam, and I wish to plant in each kind the variety most suitable for it. Respectfully yours, N. S. ROE.

A very extensive observation is needed to pronounce upon the right kind of soil required for certain varieties of the apple—there are so many causes to influence success, that it is difficult to arrive at a *general rule*, applicable everywhere. Within our own limited experience, however, we have found the Swaar to do much the best on strong, rich, rather heavy soil, and the Roxbury Russet rather best on those of a lighter character. Not much difference has been observed relative to the Esopus Spitzenburg. ☞ The great thing however for success, and nearly always much more important than all else, is *good, rich, careful cultivation*, on whatever soil the trees may stand. The Melon apple is inferior to none as a table fruit—but it is a slow grower, and only moderately fair and productive.

Grapes and Strawberries.

I propose to start two grape vines this spring, and would like your views as to the best sort, quickest to realize from, and best modes of culture; also the best sorts of strawberries. J. C. PATTEN. *Le Roy, N. Y.*

For ordinary open air culture, our correspondent will find the Isabella to answer his purpose best, and to be the most productive. The seasons in Western New-York are hardly long enough for the Catawba, which is otherwise equally excellent. The Diana is ten days earlier than the Isabella, but a slower grower. The Clinton is early, productive, and vigorous, but not so good as the others we have named. Grapes need a deep, rich, and sufficiently dry or drained soil, which must be kept cultivated; usually any fertile garden soil will answer, but the deeper and richer the finer will be the fruit. Pruning is absolutely necessary, twice a year—for directions, see any of the best works on the culture of fruit.

The best strawberries for the above locality, are Large Early Scarlet, Hovey's Seedling and Burr's New Pine.

Best Currants.

MESSRS. EDITORS—In a late No. you have given some directions about pruning the currant bush. Now I want to know what kinds are best for marketing—the best mode of cultivation, the distance apart, and particularly whether it is best to trim to a single stem or to set them in the old way. D. B. RICHARDS.

The best sorts for market are the Red and White Dutch. The White Grape currant is also a very productive sort. The two former are but little larger than the common red and white sorts, but possess a decided advantage in longer bunches. But if they cannot easily be had in quantity for planting in market grounds, the common sorts with high culture and pruning will do nearly as well, and grow more than triple the ordinary size.

We have not found it best to train the bushes to a single stem, unless it branches out close to the ground. The only advantage of the single stem is ease of clean cultivation. The currants will grow as large and abundantly if the several stems of an ordinary bush are kept well pruned, and under the best cultivation, that is with manuring and a clean mellow soil. All wood over three years old should be kept constantly cut away, and the young and vigorous shoots left—which should be evenly distributed through the bush, and never crowded. A constant succession of these may be more easily kept up on a plant bushing from the ground, than on a single stem a foot high.

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☞ Any one who wishes to purchase a fine farm, well stocked with fruit, in a good neighborhood, with the best facilities for markets, is referred to the advertisement of WM. R. SMITH in this paper.

Hovey's Magazine.

The last number of this standard horticultural journal contains several interesting papers. The leading one is the account of the new seedling grape, raised by E. W. Bull, of Concord, Mass., and known as the *Concord grape*. It was raised from a very early native seedling, supposed to be impregnated by the Catawba. It has now fruited for four years, and we are assured it has proved uniformly excellent; but its most striking and valuable characteristic is its early period of ripening, which is about four weeks before the Isabella, and two weeks before the Diana. An engraved representation is given, of a very showy bunch, which for size and dimensions of berry, is as large as very fine specimens of Black Hamburg. Some of the berries are said to be an inch in diameter. The following is the description given:—"Bunch large, long, neither compact nor loose, handsomely shouldered; berries roundish, large three quarters of an inch in diameter, sometimes measuring an inch; skin thin, very dark, covered with a thick blue bloom; flesh very juicy, nearly or quite free from pulp; flavor rich, saccharine, and sprightly, with much of the delicious aroma of the Catawba; vine, very vigorous, making strong wood; leaves very large, thick, strong nerved, not much lobed, and wooly beneath." We are informed that the raiser of this grape has now 2,000 seedlings in cultivation, from which he hopes to get something valuable.

John Fisk Allen, of Salem, who stands at the head of American cultivators of the foreign grape, furnishes the following list of "grapes that may be forced, and which will mature their fruit in the least period of time:—Pitmaston White Cluster, Musque Verdal,—these two ripen soonest,—Macready's Early White, Black July. For cold houses, or houses where little heat is used for the main crop, he regards the Black Hamburgh (in its varieties) as the most suitable, and the most generally esteemed,—in common with nearly all cultivators. For late or retarding-houses, where grapes are required that ripen very late, and hang several weeks after ripe, without wilting, the following are regarded as best:—Wortley Hall Seedling, Syrian, West St. Peters, Queen of Nice (moderate bearer), Prince Albert (poor bearer), Ferrar or Black Portugal, Portieu Noir, Muscat of Alexandria in its varieties. The old Black St. Peters and Black Prince are very inferior to the preceding. Zinfindal dries too much.

Coe's Transparent Cherry is highly commended for its productiveness and handsome fruit, and is recommended even for the smallest collections. The committee awarded the Appleton gold medal (value $40,) to Hovey & Co., for their new seedling, now proved for five years. This is known as the *Hovey cherry*.

Walker's Seedling Strawberry, and Houghton's Gooseberry, maintain their high character—the latter being the only gooseberry recommended, on account of its freedom from mildew. The best shows of strawberries have been made with Hovey and Boston Pine; and of raspberries, with Knevett's Giant.

Mr. Mathews' Curculio Remedy,

TO BE TESTED IN THE SPRING BY COMMITTEES.

Mr. Tucker—Having received a letter from Hon. James Mathews, of Coshocton, Ohio, requesting me to act as an agent for him in the Eastern States, with reference to his curculio remedy, and having given my consent to act in that capacity, I now give notice, that he has communicated said remedy to me, and that I am a duly authorised agent to have committees appointed, and before them, to test, the coming spring, his curculio remedy; with this view I have written to the officers of the Boston Hort. Society, N. Y. St. Ag. Society at Albany, and the Onondaga Ag. Society, requesting that a committee of three persons, shall be appointed by each Society, to examine into the application of this remedy, its cost and facility, as regards application, &c., and report its effects in detail, to the said Societies the coming fall, or when the crops of plums are beyond all danger and perfectly secured.

As Mr. Mathews, (as well as myself,) has had numerous applications for state, county and individual rights, the latter ranging in sums from $10 to $100, I am instructed by Mr. Mathews to say that "he has determined to communicate the discovery to no one, until it has been submitted to and received the *favorable* report of at least *three horticultural* committees, composed of men in whose *skill* and *integrity* the public will have the utmost confidence, after which he will forthwith give notice, in the horticultural journals, that he is ready to communicate the discovery, with specific, printed instructions, whenever he has received from horticultural committees or individuals offers of rewards which in the aggregate shall amount to such sum as he may think a sufficient remuneration for his trouble, in proportion to the importance or value of such a remedy, and when such rewards are offered, he will forward the instructions to all at the same time. Or should the Legislatures of one or more states deem the discovery of sufficient worth to the citizens of their respective states, so as to make appropriations, that will be satisfactory; in that case he will agree, upon the receipt of such appropriations, to make the remedy public for the benefit of every body." Should not all interested in this subject do something towards a just and full compensation, if the reports of the committees confirm Mr. Mathews' Curculio remedy? A. Fahnestock. *Syracuse, Feb. 7th*, 1854.

The above proposition cannot fail of being satisfactory to the public. The merits of the discovery will be thoroughly tested, and if they shall equal Mr. Mathews' expectations, the Societies having the matter in charge will not fail to make the effort necessary to secure him a suitable reward. The executive committee of the N. Y. State Ag. Society have already appointed a committee on the subject.

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Strawberry Culture.—A correspondent of the *Country Gentleman* says—"The finest cultivated field strawberries I ever saw, were on ground broke up without manure, and set with strawberries the next year; and the best garden strawberries I ever knew, were manured with black mold from the woods—nothing else."

Strawberries destroyed by Grubs.

By the short description your correspondent, W. P. SARGENT, gives of the grub that destroyed his strawberries, I presume it to be the larva of the cockchaffer, (*Scarabæus melolontha*,) which is often very destructive to the strawberry; commencing just below the crown of the plant, and eating its way through, after which it betakes itself to the next if not destroyed.

In newly broken ground it is often very plentiful; its presence may easily be detected by the plant becoming unhealthy, when if the soil is a little removed around the plant, may be found close to its work, and if the plant is not too far gone, by its removal the plant will recover.

This pest attacked a newly formed plantation here last summer, but being an old acquaintance, was sought for and destroyed.

The following is its history in Nicholson's Cyclopedia. The eggs are layed in small detached heaps beneath the surface of some clod, and the young when first hatched, are scarcely more than the eighth of an inch long, gradually advancing in their growth, and occasionally shifting their skins, till they arrive at the length of nearly two inches.

At this period they begin to prepare for a change into a chrysalis or pupa, selecting for the purpose some small clod of earth, in which they form a cavity, and after a certain time, divest themselves of their last skin, and immediately appear in the pupa state; in this they continue till the succeeding summer, when the beetle emerges from its retirement, and commits its depredations on the leaves of trees, breeds, and deposits its eggs in a favorable situation, after which its life is of very short duration.

It is said to be two or three years in passing from its first form into that of the perfect insect.

The larva is eagerly sought for and devoured by swine, bats, crows and poultry. EDGAR SANDERS.

Mismanagement with Apple Trees.

Four-fifths of the apple trees that have died in northern New-York during the last twenty years, have died of starvation and improper pruning. There is scarcely a man that has followed husbandry ten years, who does not know that it will not answer to take off more than five or six crops of grain in succession from a piece of land without manure; but he will take off fifteen crops of apples from his orchard in succession without adding any manure, and when the crops begin to grow light, the fruit small, and of inferior quality, he begins to inquire for the cause of such light crops. He asks his neighbor what is the matter with his orchard. He tells him it needs pruning. He being very much afraid of present cost, strives to find a man that will do it cheap. (Most farmers if they are obliged to have a leg cut off, employ the most skillful surgeon they can find, who performs the operation with the sharpest of instruments; but the same men generally employ the cheapest bunglers they can find to cut off the limbs of their apple trees.) He soon finds a cheap bungler, who knows scarcely enough about pruning to tell a live branch from a dead one when the leaves are off; and to make it come cheaper he hires him by the job, and gives him all the branches to pay for the labor. This induces him to cut off twice as much as he otherwise would. He now commences the work of death upon the orchard, and with an axe or dull saw cuts or haggles off about half of the branches. The next year the apples being much larger, Mr. Unthrifty thinks he has accomplished the great object. The reason why the apples are larger is, the few branches receive the same nutriment that the whole received before. The branches being improperly cut off, the stocks do not heal over, but soon die, rot, and form holes into the trunks of the trees; these holes let in the water, which soon destroys the inside of the trunk; this, together with the want of food, acts so powerfully upon the vitality of the trees, that after vainly struggling for a few years, they give up and die; and who blames them? No man of good sense can.

This man now finds his plans frustrated, and again inquires of his neighbor what has caused the death of his orchard. He tells him it must all be laid to the climate, and the only thing that he can do is to set out a young orchard. He says to himself this will be of no use to me, for I am now sixty years old; but as I have children who are fond of apples, I will set out a few trees to gratify them. The first step he takes is to find where he can get the trees cheapest, without any regard to the manner in which they have been trained. Unthrifty being a man who deals mostly in cheap articles, he employs a man to furnish the trees and set them by the job. This he does for 16 cents a piece. It is frequently the case that people who work by the job slight their work; he is therefore very careful not to dig the holes too deep, nor too large. He digs them about as large as a peck measure; into these small cavities he crams in the roots of the trees, and if he cannot get them all in the hole, he cuts off part of them with his shovel. He then throws back the sods and lumps around the trees, and pronounces them set in first-rate order. He then receives his money and is off in haste. Unthrifty soon expects to see a thrifty orchard, but is greatly disappointed. The trees being improperly trained, and improperly set, one-half of them die the first season. The remainder being sickly, languish for three or four years, during which time one-half of them die. Of all the trees set in this way, not more than one in ten is ever profitable. About this time Mr. Unthrifty dies, leaving his unthrifty orchard for his children, who are not very thankful for the orchard which their father has left them, at the same time thinking him to be nearly as wise as any man in the United States. This is the way many men manage with their orchards, who boast of being enlightened, and who are living in these free and enlightened states of North America. I would like to say more on this subject, but will defer it till a future period, well knowing that the minds of men are much like their stomachs,

If cramm'd too full, they throw out the whole,
But if fed by degrees, they digest all with ease.

Hoosick, Rens. co., N. Y. ELIHU CROSS.

Market Fruits—Show and Value.

A proof of the higher estimate that is placed on fine show and little merit, in comparison with high merit and plain exterior, by this superficial Yankee nation, is furnished by Dr. Kirtland in his letter to the North-western Fruit Convention, published in the Transactions of that body. He sent into market several bushels of the Beurré Van Marum—a *third*-rate, but yellow and showy pear; and a quantity of the Beurré Bosc, one of the finest flavored of all existing varieties, but with a rusty and unimposing exterior, both being fully ripe. The intelligent people of Cleveland gave very readily from two to three dollars per bushel for the showy *third-rate* pear, but would pay nothing for the rich and melting Boscs. The reason of this is, the great mass of the community, notwithstanding the enormous dissemination of fruit trees of late years, and the increase of pomological knowledge, do not know what good fruit is. But the time will come when they will be wiser than to prefer a pumpkin to a Seckel pear, or a handsome sack of saw-dust, to a rough looking bag of superior flour.

Cleanliness and Neatness.

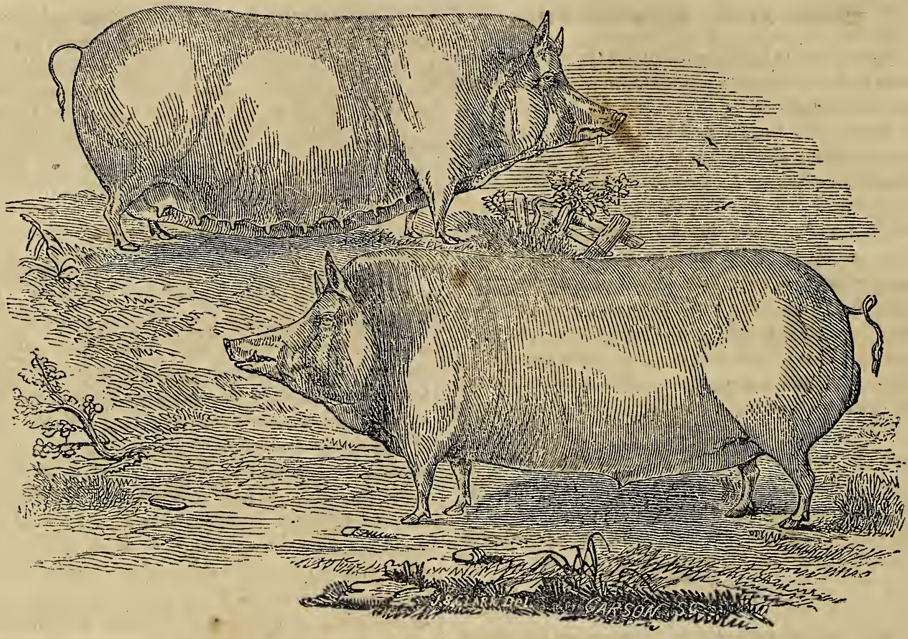
We were once visited by a distinguished pomologist. He was what the Yankees would call "a first-rate clever fellow,"—but, he spit the apple skins of the specimens we were testing, down on the office floor, whenever he had occasion to get rid of them. We carefully gathered them up with our fingers before his eyes, and he took the hint. This is not so bad, however, as the more common practice of squirting a certain brown infusion known as "tobacco spit," on clean floors. Another evil is a great annoyance to decent housewives, viz., the practice of carrying into clean rooms a certain dark brown compound of pudding-like consistency, known by the name of "*mud*," which adheres to boots and shoes in the spring of the year. Every civilized farmer must certainly consider it necessary to provide a good scraper at each of his doors, and a well-made straw, grass, hemp, husk, or sheep-skin mat, within doors. We shall not probably offend any of our numerous subscribers,—for we trust they are all neat, considerate, and civilized men,—when we say that the man who has a filthy door-yard, a filthy barn-yard and animals, and filthy boots within doors, is a boor and a barbarian; it is those who will not read, and whom we consequently cannot hit, that indulge in slovenly habits. On some farms, however, the fault is not confined to the men; for it often happens that the queens of the kitchen, though they may keep their floors and their persons very neatly, have a most unlady-like practice of pouring dirty slops and soap-suds down into puddles close beside the kitchen doors, which in warm weather exhale odors which decidedly eclipse those milder perfumes emitted by the skunk and by assafœtida. Now, we have heard the remark that dirty people are good natured; if so, we hope every muddy-booted man, and puddle-making housewife, will good naturedly make a mutual bargain that the one shall provide scrapers and keep his sole as well as his body clean, if her ladyship will only agree to carry the slop to the nearest fruit trees, or if that is too far, to the liquid manure barrow, provided with cask and cover for this purpose by her clean-booted husband. You may depend upon it, that no one can have a first-rate morality at heart, who allows the accumulation of impurity on his person or around his premises.

Painting Implements.

A great saving may be made by keeping implements constantly under shelter when not in use. But this is nearly impossible; and besides, many of them must of necessity be exposed during their employment to many days of hot sun and occasional showers. It is therefore very important to keep them *well painted.* As a general average, they will last twice as long by the protection of a coat of paint, renewed as often as it is worn off. Now, only look at the economy of the thing—a harrow, horse-rake, or cultivator, may cost from five to ten dollars; a good coat of yellow ochre, renewed as often as worn off, would never cost a fiftieth part of this sum, and would save its small cost many times over. Every good farmer has invested hundreds of dollars in his carts, wagons, sleds, plows, cultivators, rollers, harrows, rakes, wheelbarrows, spades, pitch-forks, ladders, &c., and it will be much better for him to save a few hundreds in the course of ten years, by keeping a pot of paint always at hand, to apply to his washed or cleaned implements on some rainy day, than to try to make the same amount by seeking extra prices for his produce, by overreaching his neighbors, or by refusing a helping hand to the sick and destitute. We have mentioned *yellow ochre*—this is one of the cheapest paints, as well as the most durable, and being of a light color, it will not absorb so much of the hot sun's rays as a darker color, and consequently will not cause heating, warping, and cracking of the wood to which it is applied.

Keeping Eggs.

Our correspondent C. D., of Butternuts, N. Y., objects to our theory respecting the non-adhesion of the yolk to the small end of the egg, when that end is placed downward. He remarks, "I do not know what kind of eggs *fifty-dollar hens* may lay; but I do know that in eggs laid by common hens, the air-bubble is in *the other end.*" We of course admit what every one knows, that when the contents are discharged from the shell, a vacancy between the shell and the skin at the large end is very visible; but this does not prevent the adhesion of the yolk to that part when the large end is placed downwards, and the consequent destruction of the value of the egg. Whether the smaller air-bubble at the other end, or some other cause, prevents the adhesion to that end, we shall not argue; but the *fact* that the egg keeps well when the small end is down, and that it does not when placed in other positions, is what we have to do with in *practice*, and to which we wished particularly to call the attention of our egg-keeping readers.



SUFFOLK PIGS.

Suffolk Pigs.

Mr. Tucker—The above are portraits of the justly celebrated Suffork boar "Prince," and a sow of the same family, delineated from life. The picture is somewhat faulty but not flattering, as hundreds who have seen can testify. In all the good qualities that constitute a perfect animal for producing the most pork, of the best quality, at the least cost, this family stands unrivalled as yet by any in the United States. Their merit in part consists in size, length of quarters, short and lean dished heads; fine, thin and upright ears; prominent eyes, fine tail and limbs, quietness; and above all their perfect adaptation to take fat readily on the most valuable parts. I have slaughtered hogs of this breed whose live and dressed weights differed less than a ninth. No thorough-bred animals of this particular family, have as yet been slaughtered, but enough is known to warrant us in saying they will readily attain 500 lbs. weight at maturity. One litter of eight half breeds, averaged 280 lbs. at 9 months. Two ¾ do. attained 390 at 14 months. Prince, in ordinary condition, weighs from 380 to 400 pounds. Although I rather doubt the assertion of their becoming very fleshy on "two chips and a corn cob," still I know they can manufacture pork of an excellent quality from clover and apples. Jno. S. Clark. *Auburn.*

A Suffolk Boar.—We understand that Mr. Isaac Stickney, of Boston, Mass., has recently sold a very superior Suffolk Boar, bred by himself, to Mr. Calvin B. Hoit, of Elba, Genesee co. The introduction of these animals into the state is a matter in which our farmers are much interested; and all who can should avail themselves of the benefit to be derived from their use.

Tumors on the Necks of Cattle.

Messrs. Editors—"A Steuben Subscriber" asks for information respecting a pulsating tumor, on the neck of a young stag, situated about "midway between the butt of the ear and large joint of shoulder." The difficulty is, in all probability, an aneurism of the carotid artery,—a large artery passing up on each side of the neck, carrying the blood from the aorta to the head and brain. An aneurism is "a soft, pulsating tumor arising from the preternatural enlargement or rupture of the coats of an artery." When the coat is only enlarged, it is called *encysted* aneurism, forming a sort of sack of the dilated walls of the vessel. When the coat is ruptured, and the blood spreads about in the cellular tissue, it is called *diffused* aneuerism. So much for the difficulty. Now for the cure. I think I may safely say there is none. A common treatment, however, with human subjects is, to make an incision down to the artery, pass a ligature around and tie it. But the utility of such treatment is very doubtful, a large proportion of such operations proving fatal, or leaving the patient in a miserable condition. As many cases of aneuerism probably get well spontaneously as by any, or all treatment. Something perhaps, might be effected by keeping the parts wet with some solution or infusion which will contract them; and by a compress which shall act equally on the edges and top of the tumor. The best *cure in this case* is, in the opinion of the undersigned, a few bushels of meal and roots and the knife of the butcher. M. P. Cavert. *Schenectady, Feb. 13th.*

The disease for which "A Steuben Subscriber" asks for a remedy, is, probably, *aneurism*—a sack filled with blood and communicating with an artery—caused by a rupture of one of the coats of the artery, and a consequent expansion of the remaining.

The only sure cure, is to cut down upon the artery and ligate it. By this means the pulsating tumor will be obliterated.

Perhaps the better method would be to carefully prepare him for the butcher, before the rupture of the aneurism and the consequent death of the animal.

MEDICUS.

The Samson Horses.

In answer to the inquiries of W. H. S. of Rochester, Mich., in the last number of the Country Gentleman, about the Samson Horses, I will state that the stallion to which you refer in your note, was purchased by an English farmer by the name of JOHN ROBINSON, residing two miles East of Palmyra, N. Y. His stock was propagated for several years in that vicinity, when the old horse was poisoned, as it was supposed through malice or envy. His stock is very abundant and fine in the vicinity of Palmyra. Wm. P. Nottingham, Esq., of Palmyra, took the first premium at our State Fair I think, two years ago, with one of his colts. As you say he was an animal of great strength, and his stock are almost unequalled in value for cart or farm horses. R. G. P.

The horse we alluded to as imported by Mr. SOTHAM, called *Samson*, was not the one to which our correspondent alludes. When we wrote the note referred to we had forgotten that Mr. ROBINSON's horse was also named *Samson*. This horse was imported by Mr. Robinson himself in 1837, and was selected as one of the best farm horses in Sussex, England. His stock were, and we believe are still, held in very high estimation in the western part of the state.

Mange in Cattle.

MR. TUCKER—Some of my cattle are afflicted by a disease with which I am unacquainted nor can I obtain any information in regard to it. I first observed it upon a heifer, and from her several others have taken it; all of which were in good order and thriving when first attacked.

The first signs of this disease appeared upon the eyebrow in the form of a white scurfy scab; the hair falls and presents a very forbidding sore; these sores, after a little time show themselves upon the different parts of the head and neck; there are no other bad symptoms, which as yet I have been able to discover.

I am anxious to learn the cause and name of this disease and its remedy. You will confer a great favor on me if you can give me the requisite information, or tell me where it can be found. MARK A. PIERCE. *China, Wyoming co., N. Y., Feb.* 15, 1854.

We are inclined to think the disease alluded to above, is the Mange, though there are several symptoms of this disease not mentioned by Mr. Pierce. Youatt says the first symptom of the mange is a constant itchiness, the animal eagerly rubbing itself against every thing it can get at, and the scurfiness first appearing about the tail, and then spreading in every direction. It is very contagious, and the animals having it, should be immediately separated from the herd.

In the treatment of the Mange, the first step is to remove the scurfiness, which may be done by a hard brush or the currycomb, somewhat lightly applied. "This must be followed," according to Youatt, "with the application of an ointment which appears to have a specific effect on the mange, and which must be well rubbed in with a soft brush, or, what is far better, with the hand, morning and night: there is no danger of the disease being communicated to the person so employed. The ointment must have sulphur as its basis, aided by turpentine, which somewhat irritates the skin, and disposes it to be acted upon by the sulphur; and, to render it still more efficacious, a small portion of mercury must be added. The following will be a safe and very effectual application—there are few cases which will resist its power. Take of flowers of sulphur a pound, common turpentine four ounces, strong mercurial ointment two ounces, and linseed oil a pint. Warm the oil and melt the turpentine in it; when they begin to get cool, add the sulphur, and stir the ingredients well together, and afterwards incorporate the blue ointment with the mass by rubbing them together. Physic should always be administered. Sulphur, in doses of eight ounces every third day, will materially assist in effecting a cure."

Dr. DADD, in his "American Cattle Doctor," recommends the following treatment:

Rid the system of morbific materials with the following:

Powdered sassafras,	2 ounces.
" charcoal,	a handful.
Sulphur,	1 ounce.

Mix, and divide into six parts; one to be given in the feed, night and morning. The daily use of the following wash will then complete the cure, provided proper attention be paid to the diet.

Wash for Mange.

Pyroligneous acid,	4 ounces.
Water,	a pint.

Deep and Shallow Plowing.

There are some, probably one or more of the readers of this paper, who are not yet *thoroughly* convinced of the advantages of deep over shallow plowing. We say not *thoroughly* convinced, for we ook to men's actions rather than to their words when we wish to ascertain their thorough convictions, and we observe that many do yet plow shallow, though *in words* they might admit that it were better to plow deeper. Here is a fact for such farmers. In the south part of Michigan a farm was recently bought of a Frenchman, who had so treated it, that he could no longer get any good crops from it. The last spring that the Frenchman was on this farm he plowed 12 acres and planted it with corn. He plowed this corn-field with a small, worn-out plow, with a pair of small ponies, going only about three inches deep, alleging, as his reason, that the soil beneath had never been stirred, that it was cold and useless, and would, if turned up, spoil his crop. The new purchaser plowed four acres adjoining, *eleven* inches deep, and planted to corn. The corn on the 12 acres shallow-plowed looked sickly, and much of it died in the course of the summer, while that on the four acres deep-plowed, grew large and of good color, and produced more corn than the 12 acres. OBSERVER.

Information Wanted.

We invite the attention of readers to the following inquiries, and solicit from them the information desired:

Ruta Baga.—Will you or any of your numerous readers, inform me of the best system of raising ruta bagas, (called Swedes in England,) and the common field turnep, upon a strong, loamy soil? Which is the best method of cultivation, the best time for sowing, the best kind of turneps—how much seed per acre, and which is the best manure, and how much of it to the acre?

Has any one ever sowed Rape (called Cole in England) for feeding sheep in the fall, and the result? Can the seed be procured in this country, and when is the time to sow it? J. R. C.

Big-Head in Horses.—I wish to be instructed by some of your numerous readers relative to the disease called the "big-head"—the first symptoms, progress, general treatment, and remedy, if there is any. Is the disease contagious? Will other colts running in the same pasture be likely to have the disease? If any one has had experience in the matter or can give the desired information, I shall certainly be very thankful. Now I hope no one who can oblige, will wait for some one else. Suppose there should be two or three that send in an answer; the more the better, possibly. An earnest Reader.

Paint for Barns, &c.—I intend to paint my barns, out-buildings, &c., in the spring, and shall be greatly obliged if you or some of the readers of your papers will inform me as to the cheapest and most durable paint for a brown or tan color. Do you know any thing of a kind manufactured by Dr. Salisbury? J. H. Parks.

Breaking Colts.—I am about to break a three year old colt, and have never had any experience in the business. Will you or some one of your correspondents, please to give me a few hints upon the subject as soon as convenient? I wish to train the colt to be a horse of all-work—to work on the farm, and also to be used as a carriage and riding horse. How much will it answer to work her the coming summer? What is the best manner of bitting? What is the best kind and the most economical food for a young horse? I have a steady old horse with which I intend to work the colt. Information upon the above subjects will doubtless be acceptable to many besides myself. H. N. E. *Remsen*, *Feb.* 21, 1854.

Elders, Canada Thistles, &c.—I wish to inquire as to the best method of destroying the white elders, red raspberry and Canada thistle, on ground that is in no condition to plow, (new pasture.) A Subscriber.

Red Clover and Rape.—Will you be so kind as to inform me where I can obtain the large late red clover seed, and the price? Also inform me if the cultivation of rape is profitable in this country. I am told it is very profitable in the British Isles. Where can the seed be obtained, and the price? [You can procure the clover seed of J. Breck & Son, Boston, at from 12 to 15 cents per lb. Possibly they may supply you with rape seed. We know of no one who cultivates it in this country.—Eds.]

Abortion.—I have a cow combining many very valuable qualities that has had four calves; the second and fourth she lost by abortion when four or five months gone. Is there any preventive?

Saw-dust placed two or three inches deep under cows in the stable, is an excellent litter to keep them clean. A Subscriber. *Gilsum*, *N. H.*

Cider Mills.—You mentioned recently, a wonderful little cider mill, made or exhibited by John Jones, of Little Falls. Have you any personal knowledge of the machine? Can it do one-half as much as there represented? If so, I think there would be a demand for some of them here; for in this place where there used to be seven mills, there is but one left, and that nearly worn out. Those who were so lucky as to have a few apples last year, had to go six miles to get them made into cider. Tell Mr. Jones to let us know where and how his mills can be had, and not to keep all the good things to himself. Luther Butterfield.—*Tyngsboro*, *Mass.* [We know nothing more of the mill, than was there stated.—Eds.]

Churning Milk, &c.—Will any one of your numerous subscribers give us an account of churning milk when sweet, and of making the buttermilk into cheese, and its comparative results, as I wish all the information I can get upon the subject. G. A. Hanchet. *West Stockholm*, *N. Y.*

Vetches and Rye Grass.—I would like to be informed if the English "Vetch," and the "Italian Rye Grass," are cultivated here—how they have succeeded in this climate, and where they may be had? Answers to the above questions will much oblige a Subscriber.

Wire Fences—*Inquiry*—Not many months ago, the *Cultivator* talked much about *wire fences*. Time enough has now elapsed for a test of their value, for all the purposes of a fence. Will some of your correspondents who have tried them, give the result. I am very anxious to learn something reliable in reference to them, as I am destitute of rail timber, and lumber is so high in price, that a farmer may carry on his back all the post and board fence his wallet will make. There are hundreds in the same predicament, and *reliable* information would be a boon to us. C. B. *Burr Oak*,

Extirpating Wild Onions—Inquiry.—Pray will you be kind enough to inform the readers of your valuable periodical of the most practical way of eradicating wild onions from the soil. Yours very respectfully, I. S. C. *New Brunswick*, *N. J.*

Mill for Grinding Feed.—Will you or some of your readers, inform me if there is any good portable mill for grinding feed for stock, and whether it will grind corn on the cob, the price, &c. *A. C.*

Stabling Cows.—I saw in the February Cult., a letter from a correspondent, giving a plan for stabling cows so as to keep them out of the manure. He says —"it is simply to confine my cows with stanchions, upon a platform elevated four inches above a gutter immediately behind them." Will he be so kind as to state where and how these stanchions are placed so as to confine the cows upon the platform? This is to me a very important matter, and any information on the subject will be thankfully received. C. V. *Pikesville.*

A Movable Fence.

Eds. Co. Gent. and Cult.—As I am a reader of the Cultivator, and have been for some years, I take the liberty for the convenience of others, to make known my experience in the use of a movable fence; which I have found of the greatest convenience about my barns, in separating flocks of sheep, &c.

Take two sills four feet long, four inches thick, for one length, thinning the ends, and with a large auger bore two holes in the middle, and put two tough sticks, four feet high, one inch apart, so as to let a board between them. Take a half inch auger and bore the tops, put through an iron bolt with a nut to hold the top of the fence. The board placed between, can be of the length and width convenient for the place it is designed. Two make a good fence; if wanted high, a piece of board can be placed between the sticks, thus raising the upper board. In this way boards are not injured for after use, no nails being used. It can be kept stationary by making a hole in one end of the sill and driving a pin through into the ground. Mark Gridley. *Farmington*, *Ct.*, *Feb.* 10, 1854.

Notes for the Month.

☞ E. S. R. Butler, dealer in newspapers, magazines, &c., No. 114 Market-street, Wilmington, Del., is Agent for the Country Gentleman and The Cultivator.

Oxford Hoe and Edge Tool Company.—We here recieved from Joseph G. Thorp, Treasurer of the Company, a specimen of the Solid Shank Cast Steel Hoe, manufactured at Oxford, Chenango co. which recieved the first premium at the New York Crystal Palace exhibition. L. Bolles & Co., manufacturers, have also recieved the first premiums at the State Fair, at the Fair of the American Institute and at the County Fair. The sample in our possession has the appearance of being made of the best material, and is of superior workmanship. We are informed that the Manufactory of the Company is very large, and their machinery unsurpassed. They are now making 300 Hoes per day, and their arrangements will soon be completed for making 500 to 600 daily. They also manufacture Chisels, Adzes, and other Edge Tools.

By reference to an advertisement in our columns, it will be seen that Mr. Sanford Howard, editor of the Boston Cultivator, offers his services to gentlemen for the purchase of Cattle, Horses, Sheep, Swine and Poultry. We know of no gentleman in whose judgment and integrity the public may more confidently rely in the selection of any of the domestic animals. He has been for many years thoroughly conversant with all the improved breeds of cattle, and his extensive acquaintance with all the best breeders in the country will render his services particularly desirable. We have no hesitation in saying that Mr. Howard will discharge such commissions as are entrusted to him to the perfect satisfaction of gentlemen who may employ him.

Manufacture of Ag. Implements.—We learn that R. L. Allen, proprietor of the well-known agricultural warehouse and seed store, nos. 187 and 189 Water-street, New-York, has just got his new manufactory, upon which he has been engaged for some months past, into operation. It is represented as one of the most complete and perfect establishments of the kind in America. It is fitted up with a powerful steam engine, and with new and improved machinery. About 100 men are now employed in it. The improvement of old, and the rapid increase of new establishments of this kind, affords gratifying evidence of the progress our farmers are making both in improvement and wealth, and we heartily wish their proprietors the success they so richly deserve.

High Prices for Sheep.—Mr. G. P. Gardner, of Schoharie, a few days since purchased of Mr. John T Andrew, of West Cornwall, Conn., a ram and four ewes, of the New Oxfordshire breed, for which we understand he paid the handsome sum of $300. We recently had the pleasure of examining some very fine specimens of Mr. Andrew's sheep, at New-York, which attracted much attention by their great weight and fine forms. A writer in the Middlebury (Vt.) Register, states that W. R. Sanford, of Orwell, one of the oldest wool-growers in that state, has just purchased of Wm. Remelee, of Cornwall, thirty-six ewe sheep, for which he paid $1,800. They were pure bred Spanish Merinoes, descendants from the Atwood stock.

Ohio Cattle.—Two droves of beef cattle were sold in New-York last week, which are worthy of special notice—one, consisting of 124 head, from the farm of Thomas Renwick, of Ohio, sold at an average of $80, producing a total of $9,920—the other, from the farm of Col. Elias Florence, of Pickaway county, Ohio, consisting of 102 head, sold for an average of $108, making $11,016 for the lot. They were all Durham grades, had been fed two years, and were nearly all four year olds.

Important from Washington.—A telegraphic despatch announces that "Professor Mapes exhibited in that city on the 23d ult., some wheat and chess growing on the same head!" The government should take care to secure this wonder, together with a specimen of the toads which selected the "Professor's" best strawberries, and the plows with which he plowed thirty-six inches deep, to be deposited in the Smithsonian Institution for the promotion of Science among mankind.

Great Cattle Show in Ohio.—Extract of a letter from a subscriber at Springfield, Ohio.—"Our Agricultural Society have purchased 10 acres of ground and enclosed it with a good fence, and will erect substantial buildings this summer. We are going to have next September, an Exhibition of Cattle here, free to all throughout the United States. Premiums from $500 down to $50, and will amount to some $7000 in all."

Fine Pigs.—Mr. D. A. Bulkley, of Williamstown, Mass., furnishes us the following particulars in relation to some fine pigs recently slaughtered by his neighbors. J. V. S. Conklin killed five pigs, Dec. 25. They were all of one litter, one week less than 9 months old, weighed respectively 339, 319, 308, 289 and 284 lbs. In January he killed a hog of the same breed, 19 months old, which had no extra feed until September, after which he was fed as much meal, wet up with water, as he would eat, and he weighed 844 lbs. The same day a brother of said hog was killed by S. Walley, and weighed 649 lbs.

The California Farmer.—We have neglected to notice the reception of the first and second numbers of the California Farmer. It is a Weekly Journal, published by John F. Morse & Co., at San Francisco, and Edited by John F. Morse and J. L. L. F. Warren. The contents give evidence of ability, and we cordially welcome this new co-laborer in agricultural improvement. California is a broad and promising land, and we trust the "Farmer" will live to see it bud and blossom like the rose, and become one of the richest agricultural states of the Union.

Cisterns for Barns.—I wrote to you some two years since for information in regard to leading water in lead pipes for stock, &c.; but owing to great distance and small quantity of water discharged by the spring, we abandoned the idea, and resolved to try cisterns at the barn. We have had one built, 6 feet in diameter and 8½ feet deep, costing for material and mason work about $16, which I think will pay for itself this winter in time saved (formerly required for driving cattle to water,) and saving of manure, to say nothing of the comfort of cattle in having water in the yard instead of going to a distance to procure it. E. J.

Fine Wool.—We have received some beautiful samples of fine wool, from Mr. C. Lamkin of Republic, O., but are unable to estimate a price for it the coming season, as requested. We see no reason to suppose that the prices of fine wool will range lower than last year.

Heavy Pigs.—Being an attentive reader of the Country Gentleman, I find in its columns the weight of many fine pigs fatted in different sections of country. Pittstown (Rens. co.) has not been unmindful of the pork fatting business. Mr. Thomas Hoag slaughtered ten pigs, all of one litter, weighing in gross when 40 weeks old, 4,066 lbs, being an average of 406 each. Mr. H. has selected his stock from pure native Americans. A Subscriber.

Extended Circulation.—In one day last week we received letters ordering copies of our papers, from the Sandwich Islands, the province of New Brunswick, and the Territories of Oregon, Washington and Utah.

Common Schools.—A gentleman in Connecticut, an intelligent thinking farmer says—"My main hope for the American farmer is in our common schools. I trust that before long their character will be so improved as to awaken such a desire for knowledge, that instead of "snoozing" away his evenings, the farmer will be pouring over his books and papers; and in the field be digesting and sifting the thoughts of others, comparing them with such scientific principles as he has made himself acquainted with—in short, that the farmer will be made a man of thought, thirsting for knowledge, and ever ready to learn from all sources."

Potato Rot Prevented.

We learn from the February number of the Michigan Farmer, that a Mr. Webster, of Grand Rapids, in that State, has applied, with apparent success in the way of preventing rot among his potato crop, a composition consisting of one part salt, one part ashes, and two parts plaster. Of this mixture he put into each hill, when planting, a table spoonful, and at the time of hoeing, he scattered broadcast about a bushel of it to each acre. About a bushel and a half was applied, in the whole, to each acre. Some rows were left in the field without any application of this mixture. The potatoes from the ashed and the unashed rows were kept separate, "and very soon those without the application began to rot, while the others remained quite sound and good."

Answers to Inquiries.

New Oxfordshire Sheep.—*A Subscriber*, Fairton, N. J.—You can procure these sheep of John T. Andrew, West-Cornwall, Conn., and P. Reybold, Delaware City, Delaware. The price varies according to quality—probably from $20 to $50 per pair.

Black Sea Wheat.—*W. E. T.*, Lisbon.—We know of no house which imports this wheat for seed. Possibly you may procure imported seed by applying to R. L. Allen, New-York, or Jos. Breck & Son, Boston.

Minor & Horton's Plow.—*H. A.*—This plow is manufactured at Peekskill, by the gentlemen whose name it bears. It can be procured we presume at the Ag. Warehouses in this city and New-York.

Mowing Machines.—G. A., Armada, Mich., will find his inquiry answered in a late no. of this paper. There are several machines intended to operate both as mowers and reapers, but we are not sufficiently familiar with their work, to enable us to decide as to which is the best.

Draining Tile.—*J. S.*, Darlington, C. W. There is much difference in opinion among those who have used tile in this state, as to which is the best, the round or the horse shoe. Our correspondent wishes to drain a heavy clay field. Will Mr. Johnston of Seneca, give us his opinion as to which tile he considers best?

Warts on Cattle.—*G. V.* Cut them open, and apply blue vitriol in powder. This is said to be a sure cure, and by no means painful. An application of spirits of turpentine is also said to prove effectual.

Portable Cider Mill.—Your correspondent D. B. Richards, inquires, "which is the best and cheapest Portable Cider Mill, in the end, for a man to buy?" I would unhesitatingly answer, *Kulp's Patent*, from the state of Indiana. Whether the Mill is to be had in New-York, I know not, but it can be had at C. B. Roger's agricultural warehouse, No. 29 Market-street, Philadelphia—Price $35. I can recommend "Kulp's Patent Portable Combined Cider Mill and Press," from practice, having frequently used it. I may also state that in every instance in which it has come in competition with other portable cider mills, at our state and county fairs it has taken the first premium, ar far as I know. F. B. Poley. *Skippackville, Pa.*

Mange in cattle.—In the Co. Gent. of March 2, we published a letter from Mr. Pierce, asking for information in relation to a disease which first made its appearance in the eye-brows of his cattle. Mr. John Ladd, of Braman's Corners, informs us that he had several animals affected in a similar manner; and that one day, having a bottle of "Mustang Linament," he thought he would make a trial of it for this disease. He applied it to the sores, and found it a perfect cure. This Linament can be procured at most drug stores.

S. F. C., Freindsville, Pa.—We have an article waiting insertion, which will answer your inquiries fully.

C. H., Farmington.—We know nothing of the tree about which you inquire.

Charter Oak Grape.—*H. A.*—This is a very large and a very poor grape—said, however, to be good for preserves. We should consider 50 cents a high price for it.

Delaware.—A New-Yorker, who has resided for a year or two past at Wilmington, Delaware, writes us as follows:—"This is a most interesting country, whether reference be had to its agricultural, horticultural, or commercial resources. The soil is of an admirable quality, and I am greatly surprised that the tide of emigration scarcely furnishes a single rill to occupy a region surrounded by cities and traversed by navigable rivers, on the ports of which steamboats and other vessels, touching daily, afford the cheapest mode of transportation. Every thing raised by the farmer secures the highest return, and yet the land is at a very low price."

Hot Houses and Green Houses.

NEW EDITION OF R. B. LEUCHAR'S celebrated Treatise on the Construction, Heating and Ventilation of *Hot Houses*, *Green Houses*, *Graperies*, and other *Horticultural Structures*, with practical directions for their management in regard to *Light*, *Heat and Air*, with numerous *engravings*.

Published by JOHN P. JEWETT & CO., Boston.

For sale by the trade generally and at seed stores.

March 2—w6t

Great Work on the Horse,

BY DR. GEORGE H. DADD, the celebrated English Veterinary Surgeon. This valuable work, the experience of a life, is now going through the press, and will be published by JOHN P. JEWETT & Co., during the month of April. It will be entitled "*THE MODERN HORSE DOCTOR*," containing practical observations on the nature and treatment of disease and lameness in Horses. Embracing the most recent and approved methods, according to an enlightened system of veterinary therapeutics, to be illustrated with wood Engravings, in the highest style of the Art. To be comprised in one large 12mo. vol of 400 pages or more, price *one dollar*.

JOHN P. JEWETT & Co.,
Publishers, Boston.
JEWETT, PROCTOR & WORTHINGTON,
March 16, 1854—w8tm1t Cleveland, Ohio.

Genuine Superphosphate of Lime.

THE subscriber has now on hand and is constantly manufacturing, at his works in Middletown, Conn., *Superphosphate of Lime*, which he warrants free from any adulteration, and equal, if not superior, to any in the market. It is made of *bones* prepared in the most approved manner, put up in substantial bags for transportation, and is furnished promptly to order or at the works.

He also manufactures, and has constantly on hand for the market, *Bone Dust* of a superior quality.

These fertilizers have been thoroughly tested by careful and experienced agriculturists in this vicinity, and have given general satisfaction.

ANDREW COE,
April 1—m3t Middletown, Conn.

The Original Black Hawk

WILL be kept the coming season at his old stand, the stable of David Hill, in Bridport, Vermont. His services will be limited to fifty mares Terms $50 the season.

Those wishing his services should send their names early, as those sending first will be first served.

DAVID HILL, Agent.
Bridport, Vt., April 1—m2t*

Evergreen and Deciduous Trees.

HENRY LITTLE & CO., of Bangor, Maine, will furnish Arbor Vitæ, Balsam Fir, Spruce, Hemlock, and other trees, and forward them by steamers or railroads to any part of the United States, at their usual prices.

Jan. 20—w3ms

For Sale or Lease,

5.000 ACRES OF CHOICE FARMING LANDS in Gallatin county, Illinois, in the immediate vicinity of the extensive Mining operations of the Shawnee Coal Company. A cash market for all kinds of farm products at the mines. These lands will be sold or leased to good farmers on accommodating terms.

For particulars, apply to H. H. CASEY, Sec'y,
Corner Hanover Square and Pearl street.
New-York, Feb. 1, 1854—m5t

Live Stock Agency.

IN compliance with repeated solicitation, the subscriber offers his services for the purchase of Horses, Cattle, Sheep, Swine and Poultry. His long acquaintance with different breeds and *breeders* of these animals, gives him superior facilities for procuring the best.

SANFORD HOWARD,
Office of the Boston Cultivator, Boston, Mass.
March 9—w6tm3t

Pigs, Fowls, Rabbits and Pigeons.

SUFFOLK AND MIDDLESEX PIGS, Fancy Fowls, Lop-eared Rabbits, and Fancy Pigeons.—The subscriber has now for sale a choice assortment of the above animals, purely bred from *imported stock*, and warranted genuine. Address GEO. P. BURNHAM,
Box 22, Post-Office, Boston, Mass.
Boston, March 9, 1854—w5tm3t

Devons.

I HAVE two Devon Bulls for sale, one two and the other three past, descended from the Hurlburt stock of Connecticut, of good size and build. R. S. WATSON.

Port Kent, Essex co., N. Y.—March 2—w3tm2t

Asiatic Fowls!

FOR sale, at auction prices, a choice lot of Asiatic Fowls, consisting of the Brahma Pootra, Chittagong, Grey Shanghai, and Cochin China varieties, all young fowls, and warranted to be of pure blood, and of the large breeds. Per pair, $10. Two pullets and a cock, $15. Cooped and sent by express, to any part of the United States, promptly, on receipt of the money. The above prices are extremely low, the ordinary charge for the same birds being $20 to $30 per pair. ALFRED E. BEACH, 86 Nassau-st., N. Y.

Reference—P. T. Barnum, Esq., President of the National Poultry Society. March 16—w4tm1t

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Genuine Cochin China Fowls.

25 PAIRS of select buff Cochin China Fowls for sale. They are from 6 to 9 months old and weigh from 14 to 18 pounds per pair. They are pure bred and unsurpassed. The *GENUINE COCHINS* have no superiors. A large illustrative engraving sent to applicants.

EGGS.—Cochin China, Brahma Pootra, Golden Spangled Hamburgh, Buff and White Shanghai Eggs for sale by the dozen after March 20th. They are all warranted pure.

Address, RODNEY L. ADAMS, Lyons, N. Y.
March 16—wtfm1t

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Eggs for Hatching.

THE subscriber offers for sale, during the coming season, Brahma Pootra Eggs for hatching, at $4 per dozen, sent to any part of the United States or Canadas. Expenses paid to New-York, Albany or Boston.

My stock is inferior to none in the United States.

Any one purchasing Eggs of me, that is not pleased with the chicks in the fall, the money will be refunded.

Reference will be given if required.

DARIUS GARDNER,
Jan., 1854—m4t Norwich, Conn.

Country Seat on Staten Island.

FOR SALE, a Cottage with 12½ acres of land situated in one of the most healthy parts at the upper end of the Clove Valley, 2½ miles from Vanderbilt's Landing. The Cottage is of brick, in the Gothic style, of a moderate size. About three acres of the ground are in wood, the rest in an unusually high state of culture; good Garden, good Orchard and good pasture land. Much of the ground is thoroughly drained and dug with the spade two feet deep. There are upwards of 700 Fruit trees (more than half being Pears) in the most vigorous growth—a good proportion in bearing. Fruit culture having been the great interest of the present proprietor, it is an orchard of rare excellence and promise. A map with the names of the varieties, warranted true, will be furnished.

The house is surrounded with flowers, shrubs and shade trees. The situation is cool in summer and warm in winter, and it would be difficult to find within so easy access (hourly or half-hourly) of the city, a place so rurally beautiful and so healthy as this. Apply to ALFRED FIELD,
March 2—w3tm1t* 13 Platt-street, New-York.

Superior Fruit and Ornamental Trees—Cheap.

WM. R. PRINCE & Co., Flushing, N. Y., in consequence of the Railroad passing through their largest Nursery, will sell 50,000 trees at very reduced prices, comprising Fruit Trees in a bearing state, and Ornamental Trees of the largest size, including the finest Evergreens and all other articles.

Catalogues comprising all the new Chinese and Japan Plants, &c., will be sent to all applicants Osier Scions of six finest varieties, $5 per thousand. March 16—w1tm1t*

An Excellent Opportunity

FOR ENTERPRISING MEN, particularly farmers, to invest funds in a business bringing large interest.

GEO. BOMMER'S PROPOSALS for the formation of a Joint Stock Company, for the purpose of erecting *an Establishment* in the city of New-York, having for its object:—1. *The Draining of Sinks*, either by means of air-tight night carts, or by atmospheric pressure. 2. *The conversion of said sink material into manure*, to be called *Improved Poudrette*. 3 The preparation of *Ammoniated Superphosphate of Lime*, a concentrated rich manure, being, in its effects, equal to guano, to be made chiefly of bones, acids, ammonia, &c.

Mr. Bommer, having always in view the farming interest, desires to have the greater part of the shares of the capital stock of said establishment subscribed by farmers; he offers to any farmer or gardener who subscribes for shares, to have manure for his own use at 25 per cent cheaper than the company's market price. Further information on the subject will be found in a pamphlet containing the basis, terms and conditions on which said establishment shall be founded, together with a statement of its fixture expenses, its working costs, and its income. Said pamphlets can be had at the office of this paper, to which place subscriptions for shares can be made or remitted, or send directly to Mr. Geo. Bommer's office, 74 Greenwich-street, New-York city.

March 23—m1t GEO. BOMMER.

McCormick's Reaping & Mowing Machine.

I AM now manufacturing 1.500 Reaping and Mowing Machines for 1854, and farmers who want machines are requested to send in their orders early. Last year I had not a supply, although I had 1,500 in the market.

I offer my large experience (both in this country and in Europe) for the last fifteen years or more, in this business, as the safest guarantee the farmer can have in the purchase of a machine of this kind, notwithstanding the pretensions of others, whose limited experience in this business accounts for their *large promises*.

Deeming it useless to insert long advertisements in the newspapers, I shall be pleased to furnish applicants with my printed circular.

Some important improvements have been made, while the machine will be found as simple and efficient as a machine of the kind can be. The important points that will present themselves in these machines will be, perfect simplicity, ease of repairing, durability, and adaptation to the wants of the farmer as a reaper and mower. I shall continue the use of the wrought iron beam, which will be found very important in mowing, because of the friction upon the ground, and liability to wear and tear a wooden beam or any sheet iron lining that may be used upon it. Another very important advantage which I claim for my combined machine is, that it can be readily changed so as to cut any desired height of stubble, as a reaper or mower, by simply removing three bolts. This principle will be found wanting in other machines, though valuable upon rough ground, or for mowing barley, or lodged oats, timothy seed, clover seed, &c., or where the ground may not be firm, and there be liability in the wheels to sink, and the cutter to be brought in contact with the ground, sand, gravel, &c. With my combined machine, the farmer has also the advantage of a Reel in mowing, which admits of a slow walk to the horses, and is especially valuable when the wind interferes with the successfu operation of the machine.

The public are now especially cautioned to beware of *Seymour & Morgan's* "NEW-YORK REAPER," also made by Warder & Brocaw, of Ohio. These men have been selling my machines, and taking premiums with them, (at the Ohio trial in 1853 and elsewhere,) *though under an injunction, the second time, since the late re-issue of my patent in April last*, and in addition to a verdict of $20,000 for past infringements.

☞ Sundry other parties will soon be held to strict account for their infringements, under this patent, which makes them just as liable to be enjoined as Seymour & Morgan.

C. H McCORMICK,
April 1—m2t By WM. S. McCORMICK.

Suffolk Pigs,

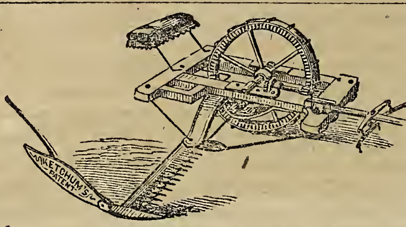
OF pure blood, for sale by B. V. FRENCH,
Feb. 1—m1y Braintree, Mass.

Hallenbeck's Mowing Machine.

THE subscriber having perfected and tested his new and improved Mowing Machine, now offers it to the public for the coming season, confident that it will not fail to give perfect satisfaction. It is simple in construction, light of draft, and perfectly free from clogging. They are built at present for me by Deering & Dederick, corner of Bleecker and Franklin streets, Albany, N. Y. A large number will be made, and are offered to the public, warranted to operate well and to give satisfaction. Persons intending to buy mowing machines will find it to their advantage to examine mine before purchasing.

For further particulars, address the subscriber at Albany, N. Y. MARTIN HALLENBECK.

Feb. 2—w&m1f



Ketchum's Improved Mowing Machine,

WITH ENTIRE CHANGE OF GEAR,

The only Successful Mower now known.

KETCHUM'S IMPROVED MACHINE, which we are building for the harvest of '54, was thoroughly tested last season, and the advantages gained by our change of Gear are in all respects as we designed, viz: *durability, convenience and ease of action*. The shafts now have bearings at both ends, which overcomes all cramping and cutting away of boxing. A counter balance is attached to the crank shaft, which gives it a steady and uniform motion. Each Machine can be thrown out of gear; there is great convenience in getting at each and every nut, all of them being *on upper side of the frame*; oil cups are attached to all the bearings, which, by the use of a wad of cotton, will hold oil for a long time, as well as protect the bearings from dust, grit, &c.; the finger bar is lined with iron its full width, which protects it from wear.

These and various other additions for strength, durability, &c., makes it the most simple and perfect agricultural implement in use. They weigh about 750 lbs. each, and can easily be carried in a one-horse wagon.

It requires not over ten minutes to get one ready for operation, there being but two bolts, (besides the pole bolts,) to be secured, to have one ready for use. They will cut all kinds of grass, and operate well on uneven or rolling lands, or where there are dead furrows. This Machine took the highest award, with *special approbation*, at the World's Fair; it also received, during last season, one silver and four gold medals, and various other flattering and substantial testimonials of approval. We have spared neither pains nor money to make this Machine deserving of public favor, and hope to be able the coming season to supply the great and increasing demand.

We take this occasion to caution farmers against buying *untried* Mowers, if they do (as was the case with many last year) they incur loss, vexation and disappointment.

If any parts are wanted to repair any Machine we have sold, or may hereafter sell, they will be furnished and only manufacturer's cost for the same be charged.

☞ In all cases where extras are wanted, be sure to give us the *number of your Machine*.

Warranty:—That said Machines are capable of cutting and spreading, with one span of horses and driver, from ten to fifteen acres per day of *any kind of grass*, and do it as well as is done with a scythe by the best of mowers.

The price of the Mower, with two sets of knives and extras, is $110 cash, in Buffalo, delivered on board of boat or cars free of charge.

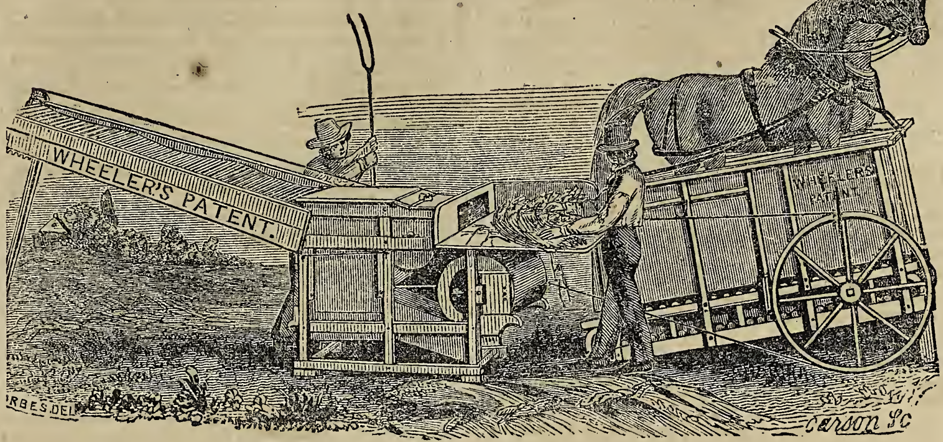
Office and Shop, corner of Chicago-street and Hamburgh canal, near the Eastern R. R. Depot, Buffalo, N. Y.

HOWARD & CO., Manufacturers and Proprietors.

The Mower is also manufactured by RUGGLES, NOURSE, MASON & Co., at Worcester, Mass., for the New England States.

By SEYMOUR, MORGAN & Co., Brockport, N. Y., for Illinois, Iowa and Michigan.

By WARDER & BROKAW, Springfield, O., for Ohio and Kentucky. March 16—w2tm3t



NEW-YORK STATE AGRICULTURAL WORKS,

BY WHEELER, MELICK & CO., ALBANY, N. Y.

THE subscribers are now making for the trade of 1854, a much larger number of all articles in their line, than they have in any previous year, and have made several improvements, which will raise their machines still higher in the public estimation.

As the limits of an advertisement will not admit of an explanation of all the advantages of our Machines, and as most of them are so well known as to need no commendation, we will make this statement brief, and for more detailed information, we refer to our printed catalogue, which will be sent by mail, *postage free*, when requested.

As we give our entire attention to the improving and manufacturing of Horse Powers, Threshing Machines, and a few other articles, we feel warranted in assuring the public that they will find each of the following Machines unsurpassed.

Wheeler's Patent Railway Chain Horse Powers.

These Powers, (represented in the above cut.) are unrivaled for driving all kinds of Farmers', Planters', and other Machinery, which admits of being driven by Horse Power. They are made for either one or two horses, and their superior merits. in point of durability, strength and ease of running. are fully established; while their compactness and simplicity, lightness, and greater length and width of treading floor and stall, give them advantages over other Powers, which are highly appreciated by those who have tried them. *Several thousands* of them are in use, some of which have threshed over 100,000 bushels, and though our present Powers are much improved over the old ones of the same kind, yet the latter are still good. Over 1,000 of them were sold by us and our agents the past season, (a larger number than in any previous year,) thus proving their increasing popularity.

Wheeler's Patent Combined Thresher & Winnower.

This Machine, (also represented in the cut,) is a late invention. It was got out three years ago, after a long series of experiments resulting in a machine which performs the *three operations of Threshing, Separating and Winnowing*, with as much despatch, and as few hands and horses as are required to thresh and separate only with other machines, and although designed for so complicated work, it is yet a model of simplicity and compactness. The entire running parts are driven by the main belts and one small band. We have no doubt it is the most perfect machine in use for Threshing and Winnowing. Driven by two horses, they thresh and clean from 150 to 200 bushels of wheat, or twice that quantity of oats per day.

From the Valley Farmer of August, 1853.

Wheeler's Combined Thresher and Winnower.

We take pleasure in laying before our readers the following extract from a letter just received by us from a very respectable individual in Cape Girardeau county, Mo., to whom we sold one of these machines about a week ago, with the understanding that if it did not work to his satisfaction he could return it to St. Louis at our expense. It will be recollected that the manufacturers warrant these machines to thresh and clean from 150 to 200 bushels of wheat per day, or twice that quantity of oats:—

Apple Creek, Mo., July 18, 1853.

MR. E. ABBOTT—Dear Sir:—I have tried my Thresher and Winnower, and it has given entire satisfaction. I have moved the machine one mile, set it up, and threshed 242 bushels of wheat in *one day*, and have threshed 40 bushels an hour. It works finely, and is considered the best machine to thresh and save grain in Southeast Missouri. *It can't go back to St. Louis.* I think I shall thresh from 8,000 to 10,000 bushels of wheat this season. Yours truly, JAMES F. COLYER.

Having sold between 300 and 400 of the Winnowers during the past season, we could if space permitted, give many other testimonials to their utility, but the above must suffice.

Wheeler's Overshot Thresher and Separator.

This Machine is also our own invention, and has been in use 13 or 14 years, and its many advantages are appreciated by *other Manufacturers*, as well as the farming public. Driven by our double Power, it threshes and separates from the straw from 150 to 200 bushels of Wheat, or twice as much Oats, per day. For the Single or One Horse Power we make a smaller Thresher and Separator, which threshes from 75 to 100 bushels of Wheat per day. The small Machine is adapted to moderate sized farms, and as the Single Power is sufficient for sawing wood, churning, cutting stalks, straw, &c., and driving almost every kind of Machine used by Farmers, and is capable, by changing horses and elevating the power, properly, of threshing much faster than we stated above, it is a very popular machine in some sections. We would also call especial attention to our Clover Hullers, Portable Saw Mills, and Stalk and Straw Cutters, either of which are adapted to both our Double and Single Powers.

☞ All our machines are *warranted* to give entire satisfaction, or they may be returned at the expiration of a reasonable time for trial.

PRICES:

For Double or Two Horse Power, Thresher and Separator, including belts, wrenches, oil-cans, complete,	$160 00
Double Power alone, including belt,	120 00
do do without belt,	115 00
Double Thresher and Separator, alone,	40 00
Single, or One Horse Power, Thresher and Separator, including belts, oil-cans and wrenches, complete,	128 00
Single Power alone, including belt,	90 00
do do without belt,	85 00
Single Thresher and Separator, alone,	38 00
Clover Hullers,	32 00
Straw and Stalk Cutters, for Horse Power,	32 00
Circular Saw Mill, with 24 inch Saw,	38 00
One Horse Power, without band wheel,	80 00
Churn Gearing,	13 00
Band Wheel.	5 00
Band for Power,	5 00
Double Power, with Combined Thresher and Winnower, including belts, wrenches, &c.,	245 00
Combined Thresher and Winnower. alone	125 00

Orders are solicited, and will be promptly filled. Address,

WHEELER, MELICK & CO., Albany, N. Y.

FRUIT TREES,

Ornamental Shrubs, Flowering Plants, &c.

J. J. THOMAS has for sale at his Nursery, Macedon, N. Y, a fine and select collection of Fruit Trees, propagated from the *best proved sorts*, consisting of—

Apple Trees,..................			at 20 cts. each,		$15 per 100.	
Peach	do	large,..........	20	do	15	do
do	do	1 year from bud,	15	do	12	do
Cherry	do	with fine heads,	31	do	25	do
Pear	do	standards, ...	50	do		
do	do	dwarfs,........	37	do		
Plum	do	....	37	do		

Besides the smaller fruits, as Strawberries, Grapes, &c.

For those who desire it, careful selections will be made by the proprietor, of the different sorts, so as to afford a regular succession of the finest varieties, through summer, autumn, and winter, without additional charge.

Also, for sale, a large collection of hardy ORNAMENTAL TREES and SHRUBS, HERBACEOUS PERENNIAL FLOWERING PLANTS, &c., among which are a hundred selected sorts of Roses, the finest Spiræas, Pæonias, Phloxes, Tulips, &c.

Orders directed "J. J. THOMAS, Macedon, Wayne Co., N.Y.," and accompanied with remittances, will be carefully filled, and the trees or plants packed in the best manner for safe conveyance by railway. mar. 2—w5tm1t

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Highland Nurseries, Newburgh, N. Y.

A. SAUL & CO., in inviting the attention of their patrons and the public in general, to their very extensive collection of FRUIT & ORNAMENTAL TREES, SHRUBS. &c., &c., would respectfully inform them that the stock which they offer for sale the coming spring, is unusually fine, both as regards quality of trees and variety of kinds, &c.

The soil and climate of the Hudson Highlands, have rendered proverbial the success of the trees sent from here, to all parts of the Union, and the accuracy and precision so indispensable in the propagation of fruit trees, for which this establishment has long been celebrated, render errors in nomenclature of rare occurrence.

They have propagated in large quantities, all the leading standard varieties, which are proved best adapted for general cultivation, especially those recommended by the American Pomological Society; as well as all novelties both of native and foreign origin.

To particularize, within the limits of an advertisement, would be impossible; they refer to their general catalogue, a copy of which will be sent to all *pre-paid* applicants, on inclosing a Post Office Stamp.

The following comprises a portion of their stock, and are all of fine growth, viz:

PEARS—in 400 varieties, both standards on their own stock, for orchard culture; and on Quince for dwarfs, Pyramids and Quenouille, for garden culture.

APPLES—in over 300 varieties, both standards, and dwarfs; also. Cherries, both standards and dwarfs; Plum, Apricot, Peach, Nectarine, and Quince trees in every variety.

GRAPE VINES—(both native and foreign for vineries,) Gooseberries, (50 best Lancashire varieties.) Currants, Raspberry and Strawberry plants of all leading and known kinds, together with Seakale plants, Asparagus and Rhubarb roots, &c., &c.

ORNAMENTAL TREES, Shrubs and Vines, both deciduous and evergreen, suitable for street and lawn planting, embracing all the new and rare Conifers, Weeping trees, and Shrubs of recent introduction.

ROSES—in every variety, including Hybrid Perpetual, Hybrid Bourbon, Hybrid China and Hybrid Damask; Prairie. Boursalt, Ayrshire, and other climbing and garden varieties, as well as the more tender; Tea, China, Bengal, Bourbon, and Noisette kinds.

HERBACEOUS PLANTS.—A large collection of Pæonias, Phloxes, Campanula, Penstemon, Œnothera, &c., &c.

DAHLIAS and bedding plants, for the parterre and flower garden, in large quantities and variety.

HEDGE PLANTS.—500,000 Osage Orange plants of two years' growth, in three sizes, at $10, $8 and $6 per 1,000. Also, Buckthorn plants, two years' growth, at $8 per 1,000. Arbor vitæ for screens, &c., &c.

Dealers and *Planters* of trees, on a large scale, will be dealt with on the most liberal terms.

Newburgh, Feb. 20, 1854.—Feb. 23—w3t.infma.m2t

Basket Willow.

CUTTINGS of the best European OSIER WILLOW will be furnished by the subscriber at $3 per thousand. They can be forwarded during the winter to any part of the Union. Orders will meet with prompt attention.

Address C. P. WILLIAMS,
Jan. 1—mtf Albany, N. Y

The Concord Grape.

Messrs. HOVEY & CO., 7 *Merchants' Row, Boston,*

HAVE the pleasure of announcing that thay will offer for sale on the 1st of April next, Mr. Bull's new Seedling Grape, the whole stock of which has been placed in their hands for disposal.

This remarkably fine new American variety is the greatest acquisition that has ever yet been made to our hardy grapes, and supplies the desideratum so long wanted, of a superior table grape, sufficiently hardy to withstand the coldest climate, and early enough to mature its fruit in any part of the Northern or New-England States. It is *four weeks* earlier than the Isabella, and nearly *two weeks* earlier than the Diana. It was fully ripe the last season (1853) about 3d *of September*, when Messrs. Hovey & Co. exhibited fine specimens from Mr. Bull's original vine, before the Massachusetts Horticultural Society.

It is a most vigorous growing vine, perfectly hardy, with bunches of large size, often weighing a pound, and with large roundish, oval berries, frequently measuring an inch in diameter; color very dark, covered with a thick blue bloom; flesh free from all pulp; flavor very rich and luscious, with a fine sprightly aroma. The foliage is large, broad and thick, and the berries have never been known to *mildew*, *rot*, and drop off, under any circumstances during the five years since it has first borne fruit. All good judges who have tasted it, pronounce it far superior to the Isabella in its ripest condition. A full description of it with an engraving, appears in the February number of the Magazine of Horticulture.

Opinions of the Fruit Committee of the Mass. Hort. Society.

1852. Sept. "Seedling Grape, from E. W Bull, large, handsome and excellent."

1853. Sept. "Fully equal to specimens last year, and proves to be a remarkably early, handsome, and very superior grape."

Fine strong one year old vines will be ready for delivery April 1st, at $5 each, and to the trade at $40 per dozen. All orders will be executed in the rotation in which they are received.

Messrs. Hovey & Co. will also offer for sale, at the same time, the BOSTON PEAR and HOVEY CHERRY, two new and superior varieties of fruit, particulars of which will be given hereafter. Feb. 23—w2tm1t

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WILLIAM R. PRINCE & CO., FLUSHING, N. Y., are selling off the large stock of Trees from their 50 acre Nursery at reduced prices, the railroad being laid out through it. Extra large and beautiful Fruit and Ornamental Trees of every kind, and also smaller sizes. See full advertisement in Horticulturist. March 2—w1tm1t

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Evergreen and Deciduous Trees.

THE subscriber is prepared to furnish to order, American Arbor Vitæ, American Larch, or Hackmatack, Silver Fir, Red and Black Spruce, American Hemlock and White Pine.

Also, Elm, Maple, Birch, Beech, Ash, and High Cranberries, at very low prices—6 inches to 6 feet high—faithfully taken up and packed, so as to bear rough handling, and go to any of the Western and Southern States—from Boston, by railroad and boats. For terms, &c., address, post-paid,

March 9—w2tm1t WM. MANN, Bangor, Me.

HEDGES! HEDGES!—LIVE FENCES,

From the Maclura or Osage Orange.

H. W. PITKIN'S SEEDS AND PLANTS.

I WOULD call the attention of those who may desire to enclose their grounds with this desirable hedge, to my Osage Orange Seed, which has, the past season as heretofore, been gathered and preserved under my immediate care and direction, and can therefore be warranted fresh and genuine.

It is well known that a large portion of the seed usually purchased in market, fails to germinate. This is owing to the vital injury received in process of extraction from the apple, and the careless, slovenly manner of putting up and transporting.

Also on hand a large number of selected plants. They are so packed as to be transported with safety and little expense.

A descriptive pamphlet, containing full directions for planting seed, setting and rearing hedges, &c., mailed to purchasers. Address H. W. PITKIN, *Manchester, Conn.*

Agents—HOYT & Co., Water-street, New-York; P. B. MINGLE, Philadelphia; JOHN SEARS, Jr., Chicago; BYRUM PITKIN & Co., Louisville; D. REDMOND, Augusta, Ga.

Feb. 23—w4tm2t

Fertilizers.

GROUND BONE DUST, coarse and fine.
Superphosphate of Lime.
Poudrette of best quality.
Peruvian Guano and Fish Guano,
for sail at *Albany Agricultural Warehouse*, 369 and 371 Broadway. R. H. PEASE,
March 2, 1854—w4tm1t Successor to *Emery & Co.*

Fertilizers.

SUPERPHOSPHATE OF LIME, NO. 1, of the best manufacture; Peruvian Guano, fresh, No. 1; Poudrette; Plaster of Paris, &c. R. L. ALLEN,
Feb. 23—m3tweowtf 189 & 191 Water-st, New-York.

Fertilizers.

PERUVIAN GUANO, Super-phosphate of Lime of the following brands, Deburgh, Paterson, and Wood,
Bone Dust—sawings or meal, turnings and ground,
Potash Scrapings, Pulverized Charcoal,
Ground Land Plaster, Sulphuric Acid,
For sale at the State Agricultural Warehouse of
LONGETT & GRIFFIN,
Jan. 17—w2m—m4t 25 Cliff street, New-York.

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.
Also, Grass Seeds of reliable quality, at the lowest market price. GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by
GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Peruvian Guano.

WE are receiving our supply of Peruvian Guano per ships Blanchard, Senator and Gray Feather from the Chincha Islands, and now prepared to make contracts for the spring supply. As the demand is large we would advise all who may be in want of this valuable manure to make early application. Price, $50 per ton of 2,000 pounds. Be particular to observe that every bag is branded,

Warranted No. 1 Peruvian Guano.

Imported into the United States by F. Barreda, Brothers, for the Peruvian Government.
LONGETT & GRIFFING
State Agricultural Warehouse, No. 25 Cliff-street, New-York.
Oct. 20th—w&mtf.

Poudrette.

THE LODI MANUFACTURING CO. offer their Poudrette for sale in lots to suit purchasers, from one barrel up to 4,000 barrels, at their usual rates, viz, $1,50 per barrel for any quantity over seven barrels, delivered on board of vessels in the city of New-York free of cartage or other expense. When 200 to 300 barrels are taken, a deduction will be made from the above price. That this article has stood the test of 14 years' trial, is proof of its efficacy. It is the cheapest and best manure for corn ever produced, and it has the advantage of being useful in small quantities and harmless in large. It is a capital manure for peas, strawberries, &c., &c., and all garden vegetables.

Apply by letter or personally to the Lodi Manufacturing Co., 74 Courtland street, New-York.
Jan. 19—w4m—m4t

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."
GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

Ground Bone.

THE subscribers are now prepared to furnish Bone Dust by the barrel or ton in its pure and most efficient state, ground to any desired fineness. GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Superphosphate.

NO expense has been spared in the combination of this most fertilizing manure, which contains the natural properties of plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. It is put up in bags, at $40 per ton, of 2,000 lbs., cash.

Office of the New-York Superphosphate Manufacturing Company, No. 159 West-street, New-York.
March 1—m3t VICTOR R. KNOWLES, Agent.

Kentish's Prepared or Artificial Guano.

Twenty Dollars per Ton.

Potato Rot.—I have used "Kentish's Prepared Guano" this season on potatoes. My crop was large and all sound. Where I did not use it, the potatoes were all rotten and worthless. My neighbors also, who have not used this fertilizer, have not raised a saleable potatoe this year. I consider it a preventive of Rot. G. PREAUT.
Westchester Co., N Y., Sept. 29, 1850.

Extract of a Letter from E. B. Addison.

Alexandria Co., Va., April 22, 1851.

Dr. John H. Bayne, President of Prince George's Co. Agricultural Society, Maryland, has desired me to inform you that last spring he used African Guano, Poudrette, Peruvian Guano, and your prepared Guano on Potatos. The first two were distanced, but the result from the Peruvian and yours, was about equal. He pronounces your Prepared Guano to be a very excellent article, and esteems it highly.

Richmond Co., N. Y., July 27, 1849.

"I have made use of Kentish's Prepared Guano on potatos, cabbages, cauliflowers, corn and grapes. I found the result much more satisfactory and the produce much larger than where I used imported Guano or any other kind of manure. EDWARD JENNINGS, Gardener."

It is equally fertilizing on all crops. See the numerous certificates on this subject in the printed circular to be obtained at KENTISH & CO'S Depot,
March 1—m3t No. 159 West-st., City of New-York.

North River Agricultural Warehouse and Seed Store.

No. 53 Cortland-Street, New-York,

WHERE may be found a large and complete assortment of the best and latest improved Agricultural and Horticultural Implements, Field and Garden Seeds, Fruit and Ornamental Trees. Fertilizers of all kinds, &c., &c.
March 1—mtf GEO. H. BARR & Co.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequaled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine —also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shipping or using on plantation, farm or garden. JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilisers. Jan 1, 1853—m&wtf

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.
March 1—mtf GEO. H. BARR & Co.

Contents of this Number.

Letter on British Agriculture—Deepening the Soil, by Rev. J. A. Nash, ... 105
Flax Culture, by Observer, ... 107
Tobacco Culture in the Northern States, by S. B Buckley—Prices of Breadstuffs, ... 108
Experiments with Superphosphate of Lime, by F. C. L. 109
How to procure Guano for a Wheat Crop, by John R. Chapman—Culture of the Potato, ... 110
Bone Sickness in Cows, by Rev. J. A. Nash, ... 111
Farm Books—Good Suggestions, by J. G. K.—Pennsylvania S. Ag. Society—Standard Weight of Grains, 112
Culture of Buckwheat, by G. W. Durant, ... 113
Experiments with Guano, Superphosphates, &c., by L. W. Curtis—Cheap Cisterns, by J. H. Mattison 114
Wind Power for Farm Purposes, ... 115
Laborer's Cottages—Liquid Manure—Hens—Blackberries, by S. B. Sumner, ... 116
United States Ag. Society, ... 117
The Culture of Indian Corn and the way to make Manure for it, by J. W. Colburne, ... 118
Bone Disease, by Porter Walbridge—Best Feed for Milch Cows, by C. G.—Good Heifers, by J. Childs, 119
A Farm House in the Italian Style, ... 120
The Norway Fir, ... 121
Fruit on "Black Swamp" Land—Soils for Apples—Grapes and Strawberries—Best Currants, ... 122
Hovey's Magazine—Mr. Mathews' Curculio Remedy, to be tested in the spring by committee, ... 123
Strawberries Destroyed by Grubs, by E. Sanders—Mismanagement with Apple Trees, by E. Cross, .. 124
Market Fruits—Show and Value—Cleanliness and Neatness—Painting Implements—Keeping Eggs, ... 125
Suffalk Pigs, by J. S. Clark—Tumors on the Necks of Cattle, by Medica, ... 126
The Samson Horse—Mange in Cattle—Deep and Shallow Plowing, by Observer, ... 127
Information Wanted—A Movable Fence, by M. Gridley, ... 128
Notes for the Month, ... 129
Answers to Inquiries, ... 130

ILLUSTRATIONS.

Wind Power for Farm Purposes, ... 115
Farm House in the Italian Style, ... 120
The Norway Fir, ... 121
Suffolk Pigs, ... 126

To Nurserymen.

100,000	Norway Spruce, 5 to 15 inches.
6,000	Silver Fir, 5 to 6 inches.
3.000	English Yews, 4 to 6 inches.
1,000	do 9 to 15 inches.
2.000	Larch, 12 to 15 inches.
4,000	do 6 to 9 inches.
3,000	Scotch Fir, 6 to 9 inches.
1,000	Gooseberries—Best sorts.
1,000	Currants—Ruby Castle.
20.000	American Arborvitæ.
20.000	Sweet Briar one year from seed.
50.000	Osage Orange one year.
50,000	Asparagus Roots one and two years.
55	Varieties Strawberries.
20,000	Mountain Ash three to nine feet.

All for sale at the very lowest prices at the Geneva Nursery.
April—m1t W. P. & E. SMITH, Geneva, N Y.

Osage Orange Seed.

THE Subscribers, in order to meet the rapidly increasing demand for Osage Orange Seed, employed the past winter an agent long engaged in the business to superintend the gathering and preparing the seed expressly for our own trade, now offer for sale 300 bushels of superior Seed, all of which is warranted the growth of 1853. Dealers and nurserymen supplied on reasonable terms.

Also, 3,500 bushels of Kentucky Blue Grass Seed, cleaned in a superior manner by Byram's Patent Seed Mill. The trade supplied at the lowest market rates.

BYRAM, PITKIN & CO.,
Southwestern Seed and Agricultural Warehouse,
March 23—w1tm1t Louisville, Ky.

Every Farmer Should Own

SCHENK'S KITCHEN GARDENER—Price 50 cents.
Breck's Book of Flowers—Price 75 cts.
Cole's Diseases of Animals—Price 50 cts.
Cole's American Fruit Book—Price 50 cts.

New editions of which have just been published by JOHN P. JEWETT & Co., and are for sale at all the Book and Seed Stores. Boston, March 16, 1854—w8tm1t

New and Improved Plows,

INCLUDING the Deep Tiller, Flat Furrow, Self Sharpener, Centre Draft, Side Hill, Subsoil, Double Mold, Potato, and Cultivator Plow.

Harrows, Rollers, Seed Sowers, Cultivators and a large assortment of all other Agricultural Implements.

R. L. ALLEN,
Feb. 23—m3tweowtf 189 & 191 Water-St. New-York.

Plows! Plows!

PROUTY & MEARS' Centre Draught Plows of all the various sizes. *Rich's* Iron Beam do do.
Michigan Sod and Subsoil Plow.
Prof. Mapes' Improved Subsoil Plow.
For sale at LONGETT & GRIFFING'S,
March 16—m2t 25 Cliff-street, New-York.

Field and Garden Seeds.

SPRING WHEAT, Barley, Oats, Grass Seeds, Clover, Fresh Ray Grass, Lucern and White Clover just imported.

Excelsior Potatoes, a new and improved variety, Belgian Carrot, Sugar Beet, &c.

Garden Seeds of all kinds, including Flower Seeds.

R. L. ALLEN,
Feb. 16—m3tweowtf 189 & 191 Water-st., New-York.

Garden and Field Seeds.

A FULL and complete assortment of new and fresh Garden and Field Seeds, embracing many new and important varieties. Among the assortment of field seeds may be found—

Spring Wheat, several varieties.
Spring Rye, Barley.
Poland and Potato Oats, Buckwheat.
Peas, a large assortment.
Potatoes, choice varieties.
Clover Seed and Timothy Seed.
White Dutch Clover.
Red Top, Blue Grass and Orchard Grass,

with a complete stock of GARDEN and HORTICULTURAL TOOLS, for sale at the *Albany Agricultural Warehouse*, 369 and 371, Broadway. R. H. PEASE,
March 9, 1854—w4tm1t Successor to *Emery & Co.*

Seeds! Seeds!

FIELD AND GARDEN SEEDS, of all the different varieties, at the State Agricultural Warehouse.

LONGETT & GRIFFING,
Feb. 16—w6t—m2t No. 25 Cliff st., New-York.

Early Excelsior Potato.

THIS is a new and very superior sort. They are as early as the June potato, grow above the average size, are mealy and palatable, and have kept better than any other variety planted in this vicinity. The rot has never been known among them. R. L. ALLEN,
189 and 191 Water-st., New-York.
March 9—w3teow—m2t

Garden Implements.

HEDGE, LONG HANDLE AND SLIDING PRUNING Shears; Budding and Edging Knives; Pruning Hatchets, saws and knives; pruning, vine and flower scissors; bill and Milton hooks; lawn and garden rakes; garden scufflers, hoes of great variety, shovels and spades; hand engines, which throw water forty feet or more, syringes and water pots; grafting chisels, tree scrapers, and caterpillar brushes; transplanting trowels, reels; hand plow and cultivator, very useful to work between rows of vegetables, together with a large assortment of other implements too numerous to mention. R. L. ALLEN,
Feb. 16—m3tweowtf 187 & 191 Water-st., New-York.

THE CULTIVATOR:

A MONTHLY JOURNAL OF

Agriculture, Horticulture, and Domestic Economy.

THE PRICE REDUCED TO 50 *CENTS A YEAR.*

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Single copies, Fifty Cents—Eight copies $3—any larger number at the same rate.

Postmasters and all friends of agricultural improvement, are respectfully invited to act as agents for The Cultivator and The Country Gentleman.

THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

VOL. II. ALBANY, MAY, 1854. No. V.

Will Ashes Dissolve Bones?

The above seems to be a mooted question with some of our agricultural papers. One correspondent affirms, and another denies, that ashes are a solvent for bones; and if the farmer, not knowing what to do, where doctors disagree, appeals to the editor, he gets an answer so near to the fence that he could hardly tell whether it were on one side or the other.

The question is one of some consequence, as bones occur about every farm-house, too many to be lost, but not in sufficient quantities to warrant the expense and trouble of procuring sulphuric acid for the purpose of converting them into superphosphate of lime, which is the best course, whenever there are bones enough to make it an object. The farmer, who has but a few, can turn them to a good account, in a less troublesome way.

If the question be asked, will ashes dissolve bones? the answer is, no, not in the proper sense of that term, not as water dissolves sugar or salt. But if it be asked whether ashes will reduce bones to a condition in which they will be speedily available to plants, the answer is, yes. The Hon. PHILIP PUSEY ascertained several years ago, and, after carefully experimenting upon the discovery three or four years, published in the Journal of the Royal Agricultural Society, that bones, if placed in a pile and covered over with wood ashes, the ashes of fossil coal, leached ashes, common soil, or sand even, will heat and crumble to powder. He showed, as the result of careful experiments, several times repeated, that bones treated in this way become a valuable manure; and upon the strength of his own experience, he recommended this course to English farmers.

A friend of ours, in whom we have entire confidence, informs us that seven years ago he fell into the practice of reducing bones by means of ashes, by a sort of fortunate blunder. Being at the head of a very large family, in which fresh meat was largely consumed, he found that his Irish cook was in the habit of throwing all the bones out of the back window. This drew such a bevy of dogs, with voices, bass, tenor and treble, about the house, that it was impossible to sleep quietly. In order to withdraw temptation from the dogs, and to preserve the bones for the use of his land, to be prepared in some way then unknown, he ordered the bones to be carried and put into an old sugar hogshead, placed in a grove at a little distance from the house, and the ashes from the kitchen to be thrown on them, the hogshead to be uncovered that the rain might fall into it. Whenever an offensive smell arose from the bones, which was only in dry times, he found that a little water thrown on prevented it. As soon as the first hogshead was full, another was placed by it and filled, and then another. His intention was to use the ashes and bones on Indian corn, supposing that by the next spring the bones would be somewhat softened, so much so that they might be pounded to pieces with a sledge hammer on a flat stone. The hammer and the stone were actually procured for the purpose. But no bones were found, except near the top of the hogshead last filled. Instead of the bones, were found soft soponaceous masses, retaining the form and size of the original bones, but none of their hardness. They were easily cut through with a shovel and mixed with the ashes; and when so mixed and applied to corn at the rate of half a pint to the hill, they proved an excellent manure for corn. The experiment has been repeated every year since with good effect, not only producing great crops of corn, but manifestly leaving the ground in good order for a succeeding crop, with but very little yard manure, not more than a quarter of what would be regarded as a fair dressing, say from three to four loads to the acre. The land is a light loam, and has been under the plow incessantly for more than twenty years, bearing for the last eight years hoed crops every year, generally corn and potatoes alternately, but some of the time corn two years in succession. As yet this land shows no diminution of crops, but rather an increase. In 1851 a comparison was instituted between bone earth procured in market at 2½ cents per pound, the best Peruvian guano, and this mixture of bones and ashes. The quantity of the bone earth and of the guano applied to the hill was just half that of the bones reduced by ashes. The effect of the bone earth procured in market was barely perceptible as compared with rows that were unmanured; the effect of the guano and of the home-made bone earth (the bones reduced by ashes) was very striking, that of the guano being more manifest in June and July, but that of the bones with ashes giving decidedly the best crop in October.

The friend who has communicated the foregoing facts, gives the following, as what he believes the true theory of the action of moistened ashes on bones, and of the influence of the mixture thus formed on crops.

Bones are about one-third organic, and about two-thirds inorganic matter, the former consisting of oil and glue; the latter mostly of phosphate of lime, with a very little carbonate of lime. It is a well-known fact, that if you put a bone into a strong ley and let it remain a few weeks, the potash of the ley will combine with the organic part of the bone, forming with it soap; the earthy part, principally phosphate of lime, will retain essentially the form and appearance of the original bone; but if examined closely, will be found to have lost its texture; and if mixed with any dry substance, as clay, loam, or peat, may be easily crumbled with it into a powdery mass. This is very similar to the process of reducing bones by ashes. Were the bones to be put into dry ashes, they would heat, as in Mr. Pusey's experiments, would crumble to pieces, and the organic part would escape in the form of ammonia and other gases. But if water be added, enough to keep the ashes moist, and to exclude in a great measure the entrance of air, then the organic part of the bones will combine with potash and water, forming soap, and will leave the inorganic part (the phosphate and carbonate of lime) in a state to be easily mixed with any dry substance in the form of an impalpably fine powder; and although the phosphate may not have become as soluble as when changed to a superphosphate by sulphuric acid, yet owing to the minuteness of its division, it seems to be sufficiently soluble. The manure thus formed, containing all the ingredients of wood ashes and of bones, is found to influence the growth of the crop sufficiently early in the season, though not quite as promptly as guano, and to hold out and mature the seed perfectly. When composed of five or six parts by weight of hard wood ashes to one of bones, and kept in a cool place and sufficiently moist to prevent the escape of ammonia, it cannot be worth much if any less than half the price of Peruvian guano, as a manure for Indian corn.

Culture of Turneps, Rape, &c.

EDITORS CO. GENT.—Will you have the kindness to inform your correspondent, J. R. C., p. 136, *Country Gentleman*, that I grow turneps as follows:

I get the land in *fine* condition by repeated plowings and harrowings. In wet seasons this is sometimes difficult to get; but I would wait a few days rather than have my land lumpy after the last plowing. I then apply *lime* as follows: Four hogsheads, (60 bushels per acre, slaked)—each hogshead is slaked with one bucket of pickle, and covered with earth one foot deep, and used or spread after being in this state 24 hours, and harrowed in immediately after spreading. (If near a gas-house, I apply two wagon loads of 40 bushels each per acre, with good result.) I then apply 20 loads of 40 bushels each of good stable manure, and harrow each way until I make all fine. I then spread three hundred of *guano*, mixed with one barrel of *salt*, and commence making drills 30 inches apart, turning lime, manure, guano and salt inside of drills. I then level the top of the drills with a rake, and sow immediately four pounds Skirving's Improved Swedish Turneps per acre. In *dry soil* the drills should not be *raised* as high as in *damp*.

I have always had from 600 up to 1,000 bushels of good sound turneps from the above culture—oats next year from 44 to 52 lbs. per bushel, and four tons of hay per acre after, of the best quality. On soil of good quality, 40 loads of stable manure would give a good crop, without any other fertilizer. But in our warm summers, the manner I apply manure is much better than the common way of applying in the drill and covering over. The *salt* is good in dry summers; and in case the guano is used, half the above quantity (or 20 loads) of manure will do. You also save the *covering* and *rolling* of drills by following my plan, which is an object in the turnep season.

I always sow from the 15th June to the 12th July—best time, last ten days of June.

After culture—from the repeated plowings and the late season of doing it, my ground is free from weeds. I generally run twice in each drill with a cultivator, and commence thinning when in the fourth leaf. Before the close I go through the drills again with a cultivator, with a view to kill the growing plants in space, which will be the case if thinned in wet weather.

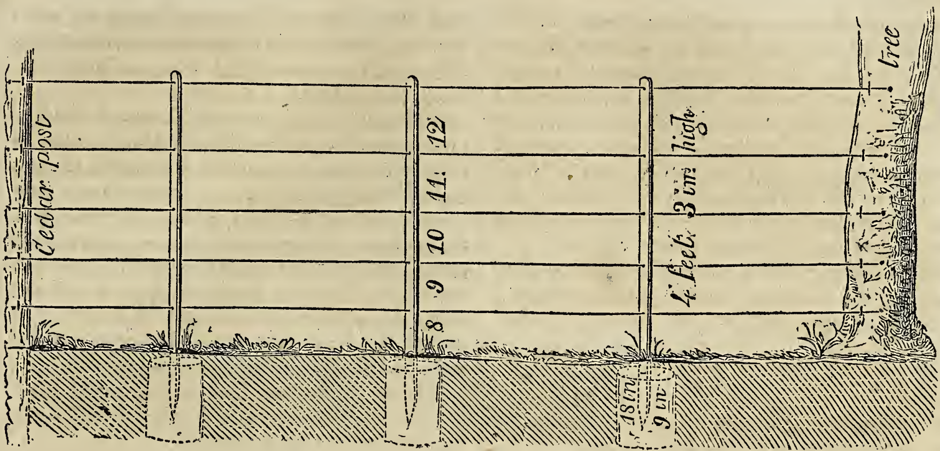
Pull and trim with any heavy edge tool that will sever the tops and bottom at one stroke. The top of an old scythe answers very well.

Your correspondent also asks about rape or cole. I do not advise any person to grow it for a crop, as the same culture would give a good crop if Swedes. I generally sow the ground when I dig early potatoes, say first twenty days of August. It makes growth about a foot high by the middle of October, and all kinds of stock are very fond of it. Our winters kill it out; but any kind of fallow land, sown in July, with two hundred guano, would give a good crop for feed. I could sell him one bushel for $4.

On same page you answer a subscriber from Fairton, N. J. I could sell him a buck coming one year old, bred from my buck Rumpy, and one of the ewes that obtained the Royal Ag. Society's prize at Norwich, both bred by Charles Large, Esq., England—price, $40. I could forward him to Boston, with the old sheep which I am exchanging with F. A. WIER, Esq., of Walpole, N. H. Yours, &c., J. H. REID. *Fredericton, New-Brunswick, March* 15, 1854.

Cure for Burns, Bruises, &c.

MESSRS. EDITORS—Having seen in your valuable paper, many good recipes, I take the liberty to send you an infallible cure for burns, cuts and bruises—*Tincture of Arnica.* I consider it the best for burns. It takes the fire out without leaving a blister; and the best remedy for cuts and bruises known. I have tried it and know it to be good E. H.



Wire Fences.

We promised lately to give some further information on the supject of wire fences. Those that have been erected of late years may be divided into two kinds, such as have succeeded, and those that have failed; in other words, the efficient and the worthless. The worthless have usually been made in the attempt to erect them at a low cost, or from twenty-five to fifty cents per rod, with slender wire, and with flimsy stiffeners. A wire fence of this sort, snapped and mutilated by the various rampant animals that have come in contact with it, and afterwards patched up with boards, rails, and brush, is not in our opinion the most ornamental and pleasing object in a rural landscape. We shall therefore dismiss at once the further consideration of this sort of barrier.

No person in this country has constructed and used wire fences with better success than Henry W. Sargent, Esq. of Fishkill Landlng, N. Y. He published about four years ago in the Horticulturist, a very clear description of his mode of construction, from which we make the following extract:—

I take common bar iron, 1¼ inch wide and ¼ inch thick, and cutting it into lengths of 5 feet, I round off the heads, sharpen to a gradual point the feet, and then pierce it with five holes to receive the wire, at the distance of 8, 9, 10, 11 and 12 inches, which are the distances of the sheep and lamb hurdles in England.

These form the uprights, and are driven 9 inches into cedar, locust or chestnut posts, 18 inches long and 5 or 6 broad, which are placed immediately below the surface of the ground, leaving only the wire uprights to show above, and are heavily rammed down,—making them rather firmer (there being less resistance to wind and other ordinary pressure,) than posts set for common board or picket fence. These uprights are set 5 feet apart. 6 or 7 would, I presume, answer equally well; and after being plumbed, the wire is drawn through and fastened securely, in hundred feet lengths, to a stout post of cedar or other wood, unless one has the good luck to find a tree, which makes a much stronger and less visible finish. I find it difficult (using simply a crow-bar as a lever,) to draw the wire tight and straight, at distances much greater than 100 feet. The wire I employ is No. 4, about the thickness or a trifle larger than a common quill, and costs in New-York, at wholesale prices, 5½ per lb.; though I since learn it can be purchased at 4½ cents.

The cost of making the fence depends somewhat on the soil. In many soils, a common post-hole auger can be used. My soil being stony, the holes were dug, and cost 4 cents apiece. My cedar posts (18 inches long,) 7 cents each; making the cost of 100 feet of fence about $13.40, or about 13½ cents per foot as follows:—

20 uprights, weighing 5½ lbs. each, 110 lbs., at 4 cts.,	$4 40
500 feet wire, weighing 100 lbs., at 5½ cents,	5 50
20 cedar posts, digging holes, staples, &c.,	2 50
Labor putting up, two men half a day,	1 00
Per 100 feet,	$13 40

Of course, the expense is increased or diminished by increasing or diminishing the number of posts. In my woods, I run the wires from trees, and require only 5 to 10 uprights, instead of 20, as in the above estimate, and in some cases none at all; while upon my lawn, I have employed 25 to the 100 feet, in order to make the wires tight and straight. In my woods, I have ran over the fence with coal tar; upon my lawn, it is painted grass green.

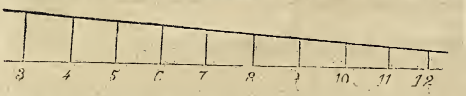
In a late letter from H. W. Sargent, he gives us the following valuable additional information: "*Formerly*, I should have stretched my wires from tree to tree, securing them to each tree at 10 to 20 feet distance by iron staples. The contraction and expansion of the wires however is such between winter and summer, that now I prefer attaching the two extremeties to some large tree, running the intermediate length through uprights such as I described in the Horticulturist, and screwing up each wire at each end with screws for this purpose, to be obtained at Longett & Griffing's, New-York. I unscrew them an inch or so at the approach of cold weather, to allow for the contraction of the iron. The wire is No. 4, annealed, although I believe No. 5 will do.

"*I have never had any fence broken by the most unruly animal, and I like them more and more each year.*

"I think that every 10 to 20 feet at least should be supported by an upright, otherwise the wires are apt to sag—my best fence has the uprights 6 feet apart."

Our readers, who propose to erect wire fences, should be very particular, *first*, to obtain *annealed* or telegraph wire, of the best quality. We have seen some very heavy wire fences snapped by large steers dashing blindly against them, when this precaution was not attended to. *Secondly*, they should see that the outer posts are braced in the direction that the wire draws upon them, in the most substantial manner. In the absence of sufficient bracing, we have seen a beautiful and costly wire fence, with iron uprights set in stone, all swept over clean by a few colts unsuccessfully attempting to vault it. *Thirdly*, the wire should be of good size—not less than No. 4 or 5—fences without number have been snapped to fragments by attempting to use such cheaper sizes as 10 or 12.

For the benefit of such of our readers as may not be familiar with the various sizes, we subjoin a diagram showing the diameters from three to twelve, indicated by the shorter or cross lines, very nearly.



Value of Ashes in Agriculture.

Eds. Co. Gent. and Cultivator—The following extract from a letter recieved by me, explains the origin of this article, which is also at your service for publication if you think desirable:—"Soliciting respectfully some information concerning the best and most profitable mode of using *ashes*, taking into consideration the kind of soil, also the crop, time to apply, quantity, management, &c., items of great importance to farmers." (Signed) Yours, &c., Rev. ——.

Dear Sir—Yours of the 22d ult., making inquiries about the best method of using ashes as a manure, was duly received, and I am happy to oblige you with any information in my power.

The inorganic part of all plants (*i. e. the ash*,) although differing in some particulars, yet so uniformly contains the same leading elements, viz. lime, potash, soda, magnesia and phosphorus, that ashes must always be of some benefit to them all. However, in addition to furnishing these elementary bodies to plants, they have other beneficial action—as chemical, in rendering insoluble bodies soluble, neutralizing acids, inducing and aiding fermentation—or mechanical, as tending to loosen or solidify the soil. These various effects of course will depend upon the kind of soil to which they are applied and other attendant circumstances. If applied to sour or peaty soils containing much inert vegetable matter, its acids will be neutralized and decomposition promoted. But if the soil is sandy, the alkali will favor the solution of the silica, forming silicates so necessary to the growth of the straw of grain and grass.

As ashes have a tendency to liberate ammonia from its combinations, they should never be mixed with guano or any nitrogenous manure, unless absorbents are present in large quantity to retain it as soon as it is set free. This is readily shown by mixing a little ashes with moistened guano or in a heap of fresh barnyard manure.

As ashes are in part readily soluble, they ought to be applied only during the growing season. Leached ashes still retain their lime and phosphoric acid; therefore, although their effects are not so immediately visible, yet they possess a high value, and their influence is very enduring.

The locality and circumstances alone must decide to what crops ashes must be applied. As they contain no weed seeds, they are a favorite dressing for all hoed crops. Mixed with plaster, in the proportions of three of ashes and one of plaster, I have used them with the greatest apparent benefit on corn, potatoes and roots, putting a small handful on each hill of the corn and potatoes when they first appear above ground, and sowing the mixture on turneps and other roots. The color of the leaves soon changes to a richer, darker green, and the plant assumes an appearance of greater luxuriance. Carrot and beet seed, soaked 24 hours, and rolled in ashes, come up stronger, and of a finer color than without the application.

By the use of ashes on cold, damp meadow, the moss is eradicated, as the increased growth of the valuable grasses soon overpowers it; but thorough draining must also be employed to produce permanent results. In making composts, which consist mostly of turf or peat, ashes are very valuable, as they aid much in decomposing such bodies.

I have had no experience in the use of ashes on light sandy land, but have no doubt of their high value there also. As a manure for fruit trees they are invaluable, containing as they do, all the inorganic materials they need, without the nitrogenous bodies stimulating to over luxuriance.

Ashes differ very much in their character and qualities, depending on the kind of wood from which they are made, and the circumstances under which it is burnt. When they are formed in a common stove and removed daily, there will remain many fragments of charcoal, largely increasing the bulk made from a given quantity of wood. A cord of wood thus managed, may yield a barrel or more, while burnt in an air tight stove where the ashes are rarely removed, it would not make a half bushel; these last, possessing equal strength, would be nearly as valuable as the more bulky product, but some caution must be used in their application to small and delicate plants, or they will be bitten, and perhaps destroyed by their causticity. The silicates may also become partially vitrified by the burning, and will be heavy like sand; in this case their action will be slower and more durable, but their actual value will remain.

Ashes are advantageously used for the destruction of insects, and protection of plants from their ravages. The slimy snail, which strips the green from the leaf of our fruit trees, leaving the fibrous part, is destroyed by throwing ashes upon the leaves when wet with dew or fog. By taking a small quantity at a time in a shovel, they may easily be thrown so as to cover the foliage of trees of considerable size.

A timely application of ashes will also to some degree save the young turneps and cabbages from the ravages of the little black beetles which attack them on their first appearance, causing them to grow less instead of greater, and the seedsman to incur the charge of having sold bad seed.

Thus my dear sir, I have set down these thoughts as they have occurred, and in closing I would repeat, that I consider the effect of ashes and many other manures, as important in their chemical and mechanical effects on the soil, as in their directly furnishing food for plants; in fact operating somewhat like the small doses of medicine called by the faculty *alteratives*, which, though insignificant in themselves, may produce great results on the system. Yours, &c., T. S. Gold.
Cream Hill, March 8, 1854.

Culture of Spring Wheat.

Messrs. Editors—Will you permit a few remarks on the questions proposed by "A New Subscriber," from one of your old subscribers, who has taken the Cultivator from its infancy, now more than twenty years.

I have raised spring wheat for fifteen or twenty years, without missing I believe a single year. It was formerly thought we could not get a crop in our town, it grew so rank and blasted; but for fifteen years I have had but one crop blasted, and that only partially.

The answer given for a fair crop, (in the communication alluded to,) was stated at "about twenty bushels per acre." As this small amount might prevent some from making a trial of it, I will state that I have not raised so light an average crop for fifteen years, except one year.

I have taken three first premiums in our county, for from thirty to thirty-two bushels.

I was taught to sow only one bushel to the acre, but by reading and practice, I found more to be necessary, until I increased to three bushels to the acre; but have found that there should never be less than two bushels, nor more than two bushels and a half sowed to the acre.

"The price (stated in the answer as above) was one York shilling less than winter wheat."

Now this cannot be fairly said to be the difference in the wheat, but in the foul stuff mixed with the wheat. Some farmers think anything almost, will do to sow that is called spring wheat; but I have learned from your valuable Cultivator, that you must sow good clean seed, if you will have a good clean crop to harvest. Nothing but the largest kernels well screened, the pure wheat itself, will do for me to sow; and then I raise wheat that will command a price with the finest winter wheat. It is preferred with us for bread, to the finest western flour. I have sold from fifteen to thirty and forty bushels per year for seed, at from $1,50 to $2 per bushel, for many years past.

The mode of culture is the all-important consideration for the young farmer. You have taught me to plow deep, and to pulverize the earth as fine as possible, so that sometimes when my men say a piece of ground is harrowed sufficiently, I have double the labor expended which they thought sufficient.

Any land that you can raise good corn or potatoes upon, will grow good spring wheat. I manure for corn, with 20 to 25 loads of barn-yard manure to the acre—put on in the spring after the sod is turned under—harrowed until it becomes as fine and mellow as a drag can make it. Thus I raise, with lime, ashes and plaster, a large and profitable crop of corn.

But now comes the spring wheat, the best and most profitable crop I can raise. The stalk ground is plowed in the fall when quite dry, or as early in the spring as the ground will do to work—deep fine furrows—only one plowing, (but the labor of twice, as some do it;) and now comes what my neighbors say is the secret of my raising spring wheat. Some of them are yet so faithless that they will not try, while many are raising as good as I do.

I put on all the leached or unleached ashes I can get—if it is six, eight or ten loads to the acre, or if only a single load—spread evenly out of a wagon, then harrow it well. When this is done, it is ready for your seed; when sowed, put on your team and harrow and make it as mellow as an ash heap.

I have been thus lengthy and particular, as I know the difficulty of getting the generality of farmers to do it just right; for I have had the question put to me so often, "if you will warrant me as good a crop as you raise, I will buy your seed." I tell them I will, if they will do just as I say, but scarcely one in ten will.

But this is not all; I never have raised smutty wheat but one year, (at least for fifteen years past,) as I have invariably attended to preparing the seed myself, except this year. I must relate this anecdote to close.

I told my man to take the wheat, the salt and lime, prepare it, and sow it as I directed. He put the lime, the salt and water together, washed the wheat and sowed it. The crop was so smutty it almost destroyed the wheat. What was the cause of this I know not; but there is a right, and when the right way is found, it should be strictly adhered to, no matter by whom first discovered.

The right way then is, take your wheat—it must be the best seed wheat—make a very strong brine, pour in a half bushel of wheat at a time, wash and skim, and skim and wash until you *know* there is nothing but wheat—then pour off the brine in another tub, put the wheat in a box, and roll it in new slaked lime, as much as you can make adhere to the kernel—keep adding brine as you need, to cover the wheat, that it may be well saturated with salt

When you harvest it, keep it away from your oats, rye and buckwheat, or thresh it from the field, so that you know you have nothing but wheat to sell, and you will not need to sell for a shilling less than winter wheat, or be satisfied with less than thirty bushels to the acre.

If you are dissatisfied call on me, and I will show you what good bread my wife makes of it, (ah, and butter too,) and this with hundreds of other suggestions, for the garden as well as the farm, which we have learned from a constant perusal of your Cultivator. My neighbors ask me what I still want to take the Cultivator for, when I am closing up my farming career. I tell them because I am not satisfied with present attainments, and would take it still, if nothing but a garden to cultivate. G. D. PHILLIPS. *Coventry, N. Y., March* 11, 1854.

Tobacco Culture in New-York.

MR. TUCKER—In answer to the inquiries of your correspondent, J. A. of Canajoharie, in regard to the culture of tobacco in the northern states, I would offer the following facts, as coming under my observation, during three years experience in cultivating this crop in Onondago county.

The kind of soil best adapted to the growth of this plant, is a sandy or gravelly one, which must be pretty highly manured; but any field, rich enough to grow a good crop of corn, will give a fair crop of tobacco. The proper system of culture is, to plow your land set apart for this crop early in the spring. (It should be land that has had some cultivated crop grown on it the year previous, as experience has proved it to be better than green sward, and not as liable to be infested with worms, which sometimes do much mischief in the early stages of its growth.) Plow again about the time you are ready to set the plants, and harrow it well. The plants should be five or six inches high, grown in a bed in the garden, or other warm rich place—sown as soon as the frost is out of the ground in the spring. Sow the seed on the ground, and spat it down hard with the back of a spade, or tread it over with your feet. A bed ten feet square, is sufficient to raise plants for an acre. The time for transplanting is from the 10th to the 25th of June. The best time to transplant is immediately after a rain. If the ground is very dry, it will be necessary to water the plants as you set them.

The ground should be marked in straight rows three feet apart, and slight hills made on these marks two feet six inches apart; then set the plants, which should be done well, taking care to press the earth firmly around the roots. As soon as the plants are started to growing, run the cultivator through, and follow with the hoe, resetting where the plants are missing. The crop should be hoed at least three times at proper intervals, taking care to hoe the ground all over. When the tobacco begins to blossom, the tops of the plants, and the suckers also, should be broken off, with some of the smaller leaves on the top of the plant. The suckers should all be broken off at the time of harvesting.

Harvesting commences the first of September, and ought to be finished by the middle of the month, as frost may be expected by that time. The stalks must be cut near the ground, and left in the sun a short time to wilt the leaves, then taken to the drying shed and hung on poles by means of strong twine, at the rate of thirty to forty plants to twelve feet of pole. The poles are to be laid across the beams about sixteen inches apart. The sheds are built high enough to hang three or four tiers, the beams being about four feet apart up and down. In this way a building forty feet by twenty-two, will cure one and a half acres of tobacco. The drying sheds should be supplied with several doors on either side to allow the free circulation of air in order to facilitate the process of curing.

It will be sufficiently cured in two or three months, when as much as is desirable is taken down in damp weather, laid in a pile, the buts of the stalks outward; the leaves are then stripped off and done up in small hanks by winding a leaf around it near the buts of the leaves. It is separated according to quality, making three qualities. It is then packed in a snug pile, the buts outward to give them a chance to dry well. Then to finish the process, it is packed in damp weather in boxes large enough to contain three or four cwt.

In the *Country Gentteman* of Feb. 23, 1854, J. A. will find an estimate of the cost per acre, of raising tobacco, to which estimate I should add about $10, making the expense of an acre of tobacco $77,50. A fair average yield per acre is 1,500 lbs. although 2,000 lbs. is sometimes raised. It is worth from seven to ten cents per lb. Growers in this vicinity sold the crop of 1852, for the latter price—the crop of 1853 is as yet unsold, but we expect to get as much as eight cents per lb. for it.

The kind of tobacco grown here, is, I believe, called "Connecticut Seed-leaf," which is quoted in New-York city papers. at five to fifteen cents per lb. according to quality. I presume J. A. could procure seed in this place at trifling cost. Yours, L. KEITH. *Liverpool, March* 6, 1854.

Dear Sir—Your correspondent will find a very complete essay on the Culture of Tobacco, in the Patent Office Report for the years 1849—1850. I have experimented very successfully in that line, and can furnish him with seed of three or four different varieties, one of which is fresh—i. e., not raised here from foreign seed, but the Cuba seed sent to me by a friend, direct from that Island. P. A. WAY. *Sewickley Valley, Alleghany county, Pa., March* 9, '54.

Buckwheat and Indian Corn.

MESSRS. EDITORS—The article from "Vermonter," on the Culture of Indian Corn, agrees perfectly with my own experience relative to raising corn after a crop of buckwheat. Fifteen or twenty years ago, I raised buckwheat several seasons, by turning over the sod in the spring, and sowing to buckwheat. The following season it was planted with corn. Though the land had become very light and mellow from the influence of the buckwheat crop, yet I could not, and never did get a decent crop of corn in this way. I came fully to the conclusion that the mischief-maker was the buckwheat. The expression of my father was, "it poisoned the ground for corn." I do not, like many others, conclude that it is one of our most exhausting crops. In my opinion it is quite otherwise. I continue to raise it, but put it on the same ground every year. I usually plow in the stubble late in the fall. I plow again a short time before sowing, and spread on a light coat of manure. This gives me a fair crop every year on the same ground. I think it quite valuable for feeding fowls, and mixed with other kinds of grain, for feeding hogs.

I have recently made an experiment with tallow and oil, in order to ascertain which is the most economical for lighting our dwellings. Did I know the readers of the Cultivator would be interested in the result, I would cheerfully give it. [We shall be glad to receive it.—EDS.] WM. N. FORD. *Feb.* 15, 1854.

Discrepant Opinions.

At a late discussion on the value of roots for feeding cows, before one of the Agricultural meetings at Boston, several interesting statements were made. J. W. Proctor said the product of the carrot crop was 16 to 20 tons to the acre—and the value in market was half that of hay—making a good acre of carrots equal to 10 tons of hay. Col. Lincoln and others had found carrots to increase the quantity of milk; and another gentleman had found them to produce as much butter from his cows in October as in summer. He had fed for two weeks on carrots; then for two weeks on rutabagas—he could see no difference in the results. His cows did not eat more than half as much fodder when supplied with roots. On the other hand, Russell, of Pittsfield, had tried turneps three or four years, and he thought cattle eat more hay when they had roots than without them. He had tried carrots and held much the same opinion with regard to them. Porter, of Bradford, thought carrots good food for cows, but did not think they increased the measure of milk. S. Sprague thought that turneps do not fatten cattle. Another person fed turneps to two cows; one fattened, the other did not.

Now, what is the reason of these discrepant opinions? Simply the want of precision and accuracy. This is the great cause of all the diversity of opinion among farmers on agricultural subjects. The quantity of roots given is *guessed* at—the quantity of hay consumed is estimated as loosely—the measure of milk yielded is stated merely to be increased—and one or two experiments perhaps, conducted in this unsatisfactory manner, are made to constitute the ground-work of an opinion, which is ever afterwards held with much tenacity. When shall we see an accurate system of weighing and measuring, in the performance of experiments, in connexion with a close observation of all controlling causes; and a repetition of trial so often and so diversified as to remove all doubt as to the operation of accidental influences?

High Prices for Grain.

Messrs. Editors—The farming community seems very generally to cherish an expectation that grain of all kinds will command high prices for a year or more to come; and, consequently, that raising as much grain as possible this next summer will be the most profitable kind of farming. The most of those with whom I have conversed on this subject, seem to have been indebted to an article in a recent number of the New-York Weekly Tribune for suggestions which have led them to plan the putting in of large crops of all kinds of grain this spring. The expectation of continued high prices seems to be based mainly upon these two facts: first, that in Europe immense numbers will be withdrawn from agricultural pursuits on account of the warlike condition of nearly every country there; and, secondly, that in this country there will be a scarcity of help for farmers, and at the same time an increased demand for grain and other farm products on account of the immense number of hands employed, and to be employed, in building railroads. The advice of the Tribune, based upon these facts, is that their country friends should prepare for a great spring crop; that they should sow all the oats they can get into the ground in good order and in proper season; that they should then plant corn upon every acre they can spare and get ready for that crop; and that, later in the season, they should sow as much buckwheat, turneps, and corn for fodder as possible, that they may be able to sell a large portion of all the grain produced. Spring wheat, beans, peas and potatoes will all secure good prices, and should, therefore, be raised this next season as extensively as possible.

These are wise and seasonable suggestions. We wish to make one more, having the same object in view. We have noticed a good many pieces and patches of winter wheat which look very yellow and sickly this spring. We are confident from what we have seen of the effects of sowing plaster on wheat in the spring, that these patches which look so pale and sickly, and which will yield but a very small crop, will be very generally restored to a good healthy green color by an early application of plaster. Even those fields or parts of fields which now look green and healthy would probably take on a healthier growth from the application of a little plaster. But we have repeatedly observed that pieces of wheat which seemed almost winter-killed, which were very yellow and sickly looking in the spring, were soon restored to a healthy color and a rapid growth by the application of a bushel to half a bushel of gypsum to the acre.

Now, if by sowing about this amount of plaster on fields or patches of fields of wheat which look sickly, and which, probably, would not yield as much as ten bushels to the acre, they can be revived and invigorated so as to be made to yield twenty or more bushels, the farmer who applies it will obviously receive very ample compensation for his outlay, time and trouble. A few bushels of wheat at present prices would reward him bountifully. While, then, the farmer gives all time and attention possible to spring crops, let him not neglect the wheat now in the ground.

The plaster may be applied with the most advantage when first we have warmth enough to cause wheat or grass to start a little. Observer.

Rotting of Fence Posts.

Messrs. Editors—A few days ago we witnessed on a neighboring farm a post and board fence, part of which was lopping over badly in consequence of the rotting of some of the posts. Upon further examination and conversation with our neighbor, we ascertained that the part of the fence which threatened to fall was made by having the post placed butt end downward. Another part of the same fence was made by placing the top end in the ground, and none of these posts have rotted nearly as extensively as those which were set the other way. I mention the fact as an additional confirmation of an opinion which is becoming every year more general, that posts will last a third or a half longer when set with the butt end upwards than when set the other way. O.

Gravel Houses.

The constant advance in the price of timber has lead to inquiries in regard to other materials for building houses, so as to bring the cost within the means of the masses wanting houses. In some sections houses are constructed of small stones laid in a mould filled in with mortar, which is smoothed on each side to form the out and inside of the house; on the top of this wall the plate is laid even with a roof in the Italian style. This kind of house is unknown in this vicinity although the abundance of stones and sand, and the almost entire absence of pine timber, would seem to render it well adapted to the locality.

Can you furnish in the Cultivator any information as to the comfort, durability and cost of said houses? Are they damp or liable to be injured by freezing? What sized stones are best adapted, and what other materials would be required for the walls of a house, say 30 feet square, and 16 feet high? What thickness would be necessary and what amount of labor to build them? R. N. M. *Gales Ferry, Ct.*

We have been informed by several persons who have enjoyed the advantages of observation, or who have had practical experience, that these houses as commonly built have proved a failure after a few years trial, and in some instances have been torn down and replaced with wood structures. Fowler & Wells have published a book in favor of this mode of building, and give minute directions for the whole process, to which our correspondent is referred for further information—but we cannot commend the plan. Building with cobble-stones, as usually practiced, is quite a different thing, and is cheap, durable, and good.

Draining Tile and Pipe.

Luther Tucker, Esq.—I notice in your last *Country Gentleman*, you wish my opinion whether tile or pipe are best for drains. So far as I have seen, there appears to be no difference. I have used but very few pipe. When I imported tile for patterns, pipe was not known for drains; therefore I began with tile, and they answering all purposes, I never made a change—only when I could not get tile I used pipe if to be got, and they do well enough. I laid from 39,000 to 40,000 tile last season. I have a few on the ground now, to put in this spring. One of my neighbors has about 20,000 tile now in his fields, and is at work digging ditches. Tiles and pipes have not been half as fast made as wanted for the last two years. Some of the makers are enlarging their works, and intend making double the quantity they formerly made; still I don't think they will then be able to supply the demand. Farmers are beginning to see that it is indispensably necessary to drain the land; and the whole ought to be drained, or at least with very few exceptions. I drain almost every part of the field now; at first I only drained the wet, or that I thought wet; but I soon found that a great proportion of that thought dry would pay well for draining. What I have done in the last eight years, I think will require no more draining.

We have now fine weather. Wheat looks as well as could be wished. Should we have favorable weather we shall have an early harvest; and unless we should after this have frosts and thaws, wheat will not be winter-killed. Still, wheat on drained land, even this spring, has greatly the advantage of that on undrained land. Yours respectfully, John Johnston. *Near Geneva, March* 17, 1854.

Notes on Various Matters.

Messrs. Editors—Feeling myself largely indebted to the Cultivator, I send you a few "Notes," which, if they are of value, may be followed by a few more. [The more the better.—Eds.]

DOMESTIC GUANO.

The droppings from the hen-roost, if carefully preserved and properly applied, we find a most valuable addition to our stock of manures. For the saving of it we have a roosting place partitioned off in the upper part of a shed for which a tight floor is laid, open at the back side, under which a large and rather shallow box is built, into which receptacle ashes, lime, plaster, and any thing of the kind is from time to time mixed with the cleanings from the floor above. This, at the time of corn planting, is drawn out, and a small handful dropped in each hill, being careful at the planting to draw a little dirt over it as the corn is dropped, as if it comes in immediate contact with the corn it will in most cases destroy the young sprout. This I consider a better way than to mix with loam before dropping in the hill, as it is less bulky, and the planter who drops his own seed can draw on a little earth before dropping his corn, with no trouble at all. I have had better corn, manured in this way, with no other manure, than from land adjoining, with quite a heavy coating in the usual way.

ASHES FOR THE PLUM.

A hint derived from your pages, saved me the last season a large crop of plums, the first we have had of any amount in some years. This was the sprinkling of dry ashes on the young fruit as recommended by one of your correspondents, to prevent the ravages of the curculio. Every morning or two, until the plums were full grown, the trees were well dusted, and the result was a bountiful crop of fine fruit. If any one has not tried it, let him do so the coming season.

USE OF POND MUD.

Some three or four years ago, as an experiment, we drew out of the bottom of a pond filled during the season with back-water from the canal, but dry in the spring, about fifty loads of mud, which was applied immediately to the land. For the first and second years it seemed to prove a decided injury, but after being turned up by the plow and subjected to the action of frost for one winter, the beneficial effects began to manifest themselves, and the best of our barn-yard manures have not produced so heavy a growth of grain, and the effect promises to be permanent. Probably a better way would have been to have piled it up for one year, or composted with other manure or with lime. R. Merchant.

Great Crop of Sugar.—I shall take the liberty to boast a little of a maple tree two feet three inches in diameter, standing on my farm in Hoosick, from which I made thirty-three pounds of sugar in the spring of 1852. Elihu Cross.

Wintering Cattle—$300 Saved.

We trust the writer of the following letter, a clergyman of Connecticut, will excuse us for giving it to our readers; and for expressing the hope also that he will frequently favor them with a chapter of his experience in rural affairs:—

Mr. Tucker—Last year I read with much interest, your excellent paper "*The Country Gentleman*," receiving it through an agent at Hartford. It was worth to me many times the amount of the subscription. Please accept my thanks for the ballance.

Now, though I am a minister, and spend most of my time in this calling, yet, being bred a farmer, and having in my hands a few acres of choice land—once the property of my grandfather who was also a minister, and in whose days it was no disparagement for a successor of Paul to imitate his example—I think it my duty and privilege rightly to improve my opportunity and my one talent for agriculture and horticulture. But how shall I do this without access to some such source of information as that of your paper? True, I could do as my father did, and he was a good farmer—many think good enough. But this does not satisfy me. Dr. Taylor used to say to us Theologs, that though he might not be so great a man in metaphysics as Dr Reid, or any one of his predecessors, yet standing on their shoulders, he ought to see further across the plain than they. So in every science, we *ought* to be wiser than our fathers. *Improvement* is the watchword of the age. It should be that of the farmer. I am glad to know that it is so with many. But I am sorry to see how many—very many there are in this state who *seem* never to have thought of such a thing.

Take one fact, for it is a fact. The value of manure wasted in this state this winter by allowing cattle to run at large in the streets and by the water courses, would have made every poor family in the state comfortable, in food, clothing and fuel, and leave a large surplus for other charities; to say nothing of the loss on poor, lean, shivering cows, the waste of fodder, &c. If it will not be considered as improper boasting, I will add by way of illustration, that I have made twice the manure with 12 head of cattle, that some have made with 30 head. And if the incredulous will come and look at my ten cows, inquire of my man how they have been fed, and how much milk they have given—look at the hay now in my barn, at the ground from which it was cut, and learn how much I have sold, I think he will admit that there is *some* advantage in housing and taking care of cattle in the winter. I do not hesitate to assert that it has been better for me by $300, to have my cows properly housed, fed, beded, and cared for generally, than it would have been to have had them running at large, trampling hay under their feet, and dropping manure about the fields and streets. Does any one doubt? My cows are worth $10 each more than they would have been = $100. I have $100 more value in manure. It has not cost as much to keep them by $50, and they have yielded at least $50 more value in milk. Indeed I think the last might be doubled.

But I am scribbling out of my line. I have sometimes thought I would say something to your readers. But I have little time, and others are doing well in this line.

Please send me the Country Gentleman for this year, commencing with January if possible. I want the back numbers if you have them, in order to make my sets complete. I ought to have written before, but my constant occupancy in another calling, must be my apology.

Sowing Plaster, Ashes, Potatoes, &c.

I saw in a late no. of your *Country Gentleman*, an inquiry about sowing plaster upon wheat in the fall. As I have tried that plan to my satisfaction, I am willing to add my mite to the great agricultural treasury. I have sown plaster at all seasons on wheat, as well as other grain and grass; and I find that when I roll the grain in plaster and slaked lime, equal parts, after having soaked the wheat in a strong brine for 24 hours, that it gives the grain a fair start, if sowed about the 10th or 15th of September. About the 20th of October, I sow one and a half bushels of plaster per acre, which gives another start to the roots as well as the blade, and will bring the grain to perfection for harvest from 10 to 15 days earlier than if the plaster is sown in the spring. The spring sowing of plaster on winter grain cannot be done to advantage early enough on account of the frozen ground and washing off—besides, it keeps it green too long. I think that I get one-fourth more grain when I sow the plaster in October than when sown in April or May. I raised 37½ bushels of screened wheat on one acre last year. I have tried it side by side, and any person could see the difference in passing the road.

I have found that my winter grain has generally been killed by the ice whenever it has covered the grain, and I tried an experiment to remove it. I had a quantity of ashes for sowing on grain and meadow, and whenever I found any ice I sowed it over with these dry ashes on a sunny day, and they soon removed the ice entirely, without any damage to the crop. I have found that a sowing of ashes on wheat was a great benefit at any time after the first of May till it blossoms.

I think if all farmers would use more ashes on their potatoes, they would have less rot among them, and a deal better crop for the table. One part plaster and two parts ashes, dropped on the potato in the hill, and then as many times after as one has it to spare to put on, *will pay*.

I think it the duty of every farmer to grow his own potatoes from the *ball seed*, and adapt them to his own soil. I don't think he would then have reason to complain of the *rot*. I have done so since 1847, and I have as healthy varieties of potatoes as can be found.

I enclose in this two seeds of the Albion pumpkin, taken from one of three that weighed together 350 lbs., from one seed, last year, without any extra effort. With care they will produce 8 or 10 hundred pounds per seed. D. A. Bulkley. *Stone Hill Farm, Williamstown, Mass., March* 7, 1854.

Experiments with the Curculio.

MESSRS. EDITORS—As an old subscriber to your paper, I take the liberty to give you my experience of the manners and habits of the plum-destroyer, the curculio, and I wish to say that *The Cultivator* has had no small share in bringing about my great success in saving my plums from their destruction.

I began at first by transplanting two trees of the Washington. They grew finely and blossomed freely, but I could get no fruit, for when about half grown they dropped off, and continued so to do from year to year. After many years' disappointment in this way, I prepared myself for the battle, with the determination to come off conqueror, which the sequel will disclose.

I furnished myself with a cloth three yards by two, of the cheap white cotton, and a stick about three feet long with a piece of an old rubber shoe fastened to one end to strike the tree or limbs, if large. Equipped with these materials, and a small boy to hold two corners of the cloth, I held one in my left hand, and the other I fastened around my neck with a string. I took the stick to jar the trees in my right hand. I continued to destroy them in this way, from time to time, for some four or five weeks with a good degree of success, until I had slain more than fourteen hundred of these destroyers, on about one dozen trees. I likewise caught some curculios on a few cherry trees near by, for I found they were not very particular whether they were plums or cherries. The result of this labor was, I had two bushels of fine plums from my Washington trees, and all my other trees bore profusely. I have continued this practice of destroying these insects, and have saved my fruit ever since, until the present time. But the best part of my story is, this plan has worked so well that I have comparatively little labor to perform, as they have mostly disappeared from my garden.

My plan is to begin to search for the insect when the plum is about as large as a marrowfat pea, and continue to take them as long as they are plenty, which generally lasts about three weeks; but they do their work of destruction mostly in a very few days. I have known them to destroy more fruit in one warm still day than all the rest of the season together; but as we know not when they get fully organized to do their mischief, we must watch for them. I search my trees twice or three times a week at first, but as they grow plentier I search the oftener, and at the time they are to be found in the greatest numbers, o3 I over my trees two or three times a day. There is no danger of them in windy weather, that is when it blows quite fresh; and in cold rainy weather they move but little. I have never seen them fly far, yet I believe they emigrate some, but comparatively do little damage if we are faithful to look after them and destroy them.

I say understandingly, that if any man will spend two minutes' time, on an average, for each tree in a season, he will surely save his fruit. In fact, I have faithfully jarred two hundred trees, when the insect was plenty, in twenty minutes, my son holding the watch while I with a small boy performed the operation. After I have gone round my trees, I open my cloth and destroy the bugs with thumb and finger, which has proved very effectual. I have tried all nostrums of the day and found them ineffectual. I have taken the worm from the plum, when but a few days old, and placed him in fine salt, in strong brine, in vinegar, and the like, and examined him with a good glass for some time, but he would not die until the application of thumb and finger, which has always proved efficient.

I believe I have killed more trees with salt than insects.

Last year my crop of plums would have been from 75 to 100 bushels, if it had not been for the heavy rains in August and September, which caused many of them to crack and rot on the trees.

I send you the number of insects taken each year, from 1847 until 1853. I could have told you how many I took each day if I thought it to have been interesting, for I have day and date of every day's work.

In 1847 I began operations June 1st, and ended July 14th,
and caught, on about a dozen trees, 1,421 curculios.
1848—May 15th to June 28th, caught.... 945 do.
1849—June 4th to June 29th,............. 975 do.
[This year, 1849, I had some 50 trees come into bearing.]
1850—June 3d to June 26th,............. 209 do.
1851—June 3d to June 25th,............. 229 do.
1852—June 4th to June 24th,............. 320 do.
1853—June 1st to June 16th,............. 864 do.

This year, 1853, I had quite a number of trees that came into bearing in a part of my garden where plums were never raised before, which probably was part of the cause of my taking so many more this year than the year before, and another reason I think was the mild winter of 1853, which was favorable for them, as they were more plenty throughout this region than for some years before. I believe that, until a way is found out to exterminate them entirely from our gardens, the jarring plan will be found the most effectual, simple and economical way to destroy this little, but formidable pest from our gardens.

Before concluding, I wish to inform you how I cultivate my plum trees. My plan is to set them twelve feet between the rows and six feet in the rows, and prune severely and cultivate highly. By so doing, my trees are not large, but full of bearing wood within two feet of the ground, and from six to eight feet high, and I have every advantage in reaching for and destroying the curculio, which you will find to be the saving of a good deal of time, and on such trees you will have more and finer fruit than on larger ones. I prune my plum trees in July, and have a second growth the same year. Yours respectfully, JOHN PARSONS, JR. *Rockport, Mass., Feb.*, 1854.

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SHEEP-SKIN MATS.—These are prepared by stretching the fresh skin, well furnished with a coat of wool, with the wool-side down, by means of tacks at the edges, and then rubbing the skin well with a powdered mixture of equal parts of common salt and alum—repeating the operation twice afterwards, on the two following days. It should remain exposed to the air, but not to the sun, till well dried.

Culture of Millet.

Mr. L. Tucker—Would you, or any of your subscribers, be so kind, by mail or through the columns of *The Cultivator*, as to give me some information relative to the culture of Millet—1. Where the seed can be obtained, and the price—2. How much seed to sow per acre—3. What soil is best adapted for it 4. What time best to sow, and, 5—What stage best to cut for hay? And any other information you or any of your subscribers may be in possession of, and oblige James Wallace. *Victory, N. Y.*

We hope some of our readers, who have cultivated Millet, will answer the above. In the mean time, we will state that it is said to do best on light soils, but of sufficient strength to bear good oats, and which should be in fine tilth. It may be sown for hay from the first of May till the middle of June, or even as late as the first of July, at the rate of three to five pecks per acre. It should be cut as soon as the seeds in the upper parts of the heads begin to harden. It will produce two to three tons of hay per acre—sometimes more, and it is said cattle prefer it to the best clover hay. It stands the drouth well, and is particularly valuable to sow in dry seasons when the hay crop is light, as it will produce a good crop of fodder when sown the last of June or first of July. The seed can be obtained of Wm. Thorburn, Seedsman, Albany, at about $2 per bushel.

Restoring Worn Lands.

Editors of the Co. Gent. and Cultivator—I wish to make some inquiries through the medium of your papers respecting the best means of restoring and sustaining the fertility of exhausted lands—the application of ashes, plaster, &c.

There are many farms in this vicinity, some portions of which are what is commonly called old field, being at so great a distance from the center of the farm, or of such a character that they cannot be manured to good advantage in the usual manner of hoed crops, and have therefore been sown to rye in many cases, so often that the crop will hardly pay for the labor. My practice for some years past has been to sow clover seed in the chaff on rye in the spring, with much success; yet the application of ashes or plaster would probably make the grass more luxuriant.

I wish to know if, in your opinion, ashes alone would benefit the grain as much as the straw and clover crop; if not, would gypsum do it, and will two bushels of the latter and thirty of the former mixed, be a good ratio? I should like your theory or experience in regard to the proper and best use of these ingredients, also their effect singly and combined.

If we can by some such application benefit our grain crops, and obtain also a good crop of clover to plow in, or feed off when it is well grown, would the land be impoverished if three or four years intervened between each grain crop?

Cannot land be brought to a given degree of fertility sooner by turning under green crops of clover in succession, as fast as they can be grown without any regard to the immediate profit of such a course, as the soil would lose but little, and gain much from the atmosphere? A Subscriber. *Vernon, Ct., Feb.*, 1854.

It sometimes happens that ashes and lime are of great benefit to old worn-out lands, and produce extraordinary results for a time, or until the fertility is restored by auxiliary manuring. But in what localities this beneficial result may be produced, can be determined only by experience—theorizing has done much more harm than good in these matters; slip-shod, careless experiments have not been much better; careful, accurate, closely measured trials, are alone reliable, and even *they* require many repetitions and modifications to become of general applicability. We would advise our correspondent to measure off a few quarter-acres, and try the experiments he proposes, weighing or measuring the results, side by side with those on untreated lands.

One of the best and cheapest modes of manuring is plowing in green crops of clover, and the process may be repeated until the soil is fully supplied with vegetable matter. A succession of two or three plowed crops, followed by a year or two of clover with a heavy growth plowed in, will generally increase the fertility of the land. A shorter term of cropping, with a similar practice in other respects, and an occasional introduction of two or three years of pasturing, is still better.

Guano for Corn.

Please let me know the best method of using guano for planting corn. Will not plaster be of service to it? F. K. A. *Tom's Creek, N. C.*

Mr. Moore, a good farmer in this vicinity, whose soil is a sandy loam, informs us that he has used guano successfully on corn, applied in the hill and sown broadcast. He uses it mixed with plaster—2 parts plaster and three of guano—well pulverised and mixed on the barn-floor. When applied in the hill, a tablespoonful is dropped in the drill, and covered about two inches with soil before dropping the seed. In this way, it takes about 150 lbs. to the acre. When used broadcast, he applies 250 lbs. per acre, mixed with plaster as above—spreads it on the ground after plowing, and then cross plows about six inches deep. This is undoubtedly the safest way of using it.

Advertised Manures.

I have a piece of land that I wish to sow with oats and grass seed this spring. The soil is thin and cold. I wish to buy manure enough to insure both crops, and be of lasting benefit to the land. Will you have the kindness to inform me through *The Cultivator* which of the advertised fertilizers would be the most advantageous to me? Likewise for corn land, same as above? and oblige a Young Farmer of Dutchess.

The most certain manures for all purposes, are the different varieties of yard manure, and the composts manufactured from them. Poudrette, provided it is honestly manufactured, has all the advantages of those composts, combined with greater strength—but we cannot inform our correspondent, from our own personal practice and knowledge, of its *relative value* as compared to yard manure, in connexion with *its price*. Next to these in certainty of effect is guano, but as commonly applied, it is not regarded as lasting more than one or two seasons. If used as a component part of composts which contain a large proportion of loam and turf, it would doubtless make a more durable fertilizer. Superphosphate of lime, and all other special manures, (that is, such as consist of one or two ingredients only,) are very uncertain in their results, as we have already shown in numerous published experiments. In some instances, they produce powerful and surprising effects, but much oftener little or no effect whatever. To be safe with them, purchase in moderate quantities and give them a fair trial—if they are successful, a larger investment may be made another year; if a failure, the loss will be moderate, and the knowledge useful. All the crops mentioned are benefited by manures, but corn more especially needs a large quantity.

Liquid Manure Compost.

There is a barn standing on my farm, and in one of its stables cattle and horses have been kept for 20 years, and there has no doubt many hogsheads of their liquid manure run into the ground underneath. Will *The Cultivator* tell me whether the earth so saturated could not be used to much advantage on some crop, and if so on what crop it can be most beneficially applied? C. SMITH. *E. Hamburgh, N. Y.*

No doubt a few inches of the upper surface under the stable is strongly impregnated with fertilizing matter, which would be useful to any crop commonly benefitted by stable manure. If we should make any distinction as to *soil* it would be to apply this earth to lands containing considerable vegetable matter, as liquid manure affords none. This may, however, be merely a nice point in theory, of no great value in ordinary practice.

Experiments in Cultivation.

It is an old and quaint saying, very applicable to experimental farming, that "it requires more than one swallow to make a summer." Farmers, like all other men, are wonderfully prone to draw general conclusions from single facts—a mode of reasoning that leads to a great deal of contention among the tenacious holders of hastily formed opinions. We often publish experiments,—sometimes for the sake of corroborating or enforcing what has been before well proved; and sometimes to accumulate a mass of information from which opinions may be formed in future when enough has been obtained to build a foundation. With this view, we publish the following extracts from a recent letter of PHINEAS PRATT, of Deep River, Ct.

SPECIAL MANURES.—It is said by some that yard manure furnishes all that is necessary for a crop. I have planted peas in a good soil (for some uses) with rotten yard manure—the crop was not worth picking, or eating after it was picked. I have planted them in common soil manured with rich compost of phosphate and ashes, or what contained them. The crop was the most productive, the largest, fullest podded, and finest flavored of the kind I ever saw. I have raised fourteen years in succession on the same ground, a fine crop, the last as good as the first, with the same kind of manure, and but a trifle of that.

HEN MANURE.—One of my neighbors sells his hen manure to the tanners for 12½ cents per bushel. Another values his at a dollar per bushel for manure. I save mine as fast as made in covered casks for compost, and think from experience it is equal to guano. A neighbor manured in the hill four acres of corn with the droppings of thirty hens of one year, and had an excellent crop.

CORN-STALKS FOR MANURE.—I have known a fine crop of broom-corn, fifteen years in succession without manure except the first year, and the stalks plowed in. Common corn, with the stalks laid in the furrow, proved a first-rate crop for many years on the same ground

Valuable Paint for Farm Buildings.

TO THE EDITOR OF THE COUNTRY GENTLEMAN—I noticed in a recent number of your paper, an inquiry for information as to which was the best paint now in use for barns and other buildings attached to farming premises. If I am not too late in my answer, perhaps my communication may be of use to your readers.

Within a few years there has been a paint discovered in one of our northern counties, which, I understand has already created no little sensation among painters and paint dealers in many parts of the state. It is known as the "American Sienna," and is manufactured at Malone, Franklin co., by Mr. HENRY B. DUANE. It has many most excellent qualities, not the least of which is its cheapness—it requiring one-third less of oil than either the Venetian Red or French Yellow. Among its chemical properties are three portions in oxide of iron, which of course penetrating the surface upon which it is applied, renders it very durable and impervious to every weather. Its fire-proof qualities also very much enhance its value. I know of one instance, where some buildings adjacent to a house painted with the Sienna, burning to the ground, did not in the slightest degree injure this paint, while the white lead paint on the window sashes became very much blistered and disfigured.

This paint is generally used throughout the northern part of this state—particularly for railroad stations and bridges, and I believe has in all cases proved superior to any now in use.

Mr. DUANE, I see, has established agencies in different parts of this and some eastern states, where his paint can be procured.

From what I have seen of this paint and have heard, I can most cordially recommend it to the use of the public. The color is a rich claret. THOMAS D. REED. *Geneva, March* 21, 1854.

We would suggest to Mr. DUANE, that it might materially promote the sale of this article, if he would advertise in this paper, the agencies where it can be procured.

Cider in Oil Casks.

I have heard it remarked that cider will not turn to vinegar in an oil cask. Would this effect be produced by drawing it out and putting it in a clean one? If not, is there any process by which it can be done, and what will effectually cleanse an oil cask? A SUBSCRIBER.

We know but little of the manufacture of vinegar in oil casks. Doubtless the chief difficulty is the thin film of oil which covers the surface, excludes the air, and prevents active fermentation. Strong, hot ley, might in time remove the oil from the wood.

Use of Guano in Maryland.

In the first place I will remark that it has become a maxim among us, that the poorer the ground the better for the application of guano. It will not pay so well if applied to ground capable of bringing 20 or 25 bushels of wheat per acre; the increased yield here, even with a favorable season, will not be over 10 to 20 per cent, and the richer the land the less yield, and some say it does no good. On such land, however, it is seldom used. But to the man who owns a farm exhausted by crops of corn, oats and tobacco of his ancestors, and upon which he has been breathing (living would be too strong a word) for years—his land too poor to bring clover even with the aid of plaster, and the farmer too poor to apply lime and manure, guano proves an enchantress that charms him out of starvation into the midst of peace and plenty. If he be a judicious man, and can sell enough of anything to buy a few tons of guano, his fortune is made. He plows up his old field in August, and about the first of October sows on from 200 to 300 lbs. of guano, and harrows it in, with a bushel and a half of wheat per acre; and where before broom sedge would scarcely bloom, he harvests from 15 to 25 bushels per acre, an increase of from three to five fold. In the March following, he sows on clover seed, and you may imagine the astonishment of the old cows the year afterwards, when cropping the blossoms of the succulent clover on grounds where formerly they had toiled all the day long for a precarious existence, browsing sassafras buds and the airy stems and blades of broom sedge.

The race of improvement is now fairly begun, and the farmer, instead of being at an expense for manures, finds, after his crop is sold and all expenses paid, a strange jingle of surplus coin in his pocket. If now he turns under his clover as deep as he can drive it, and applies 100 bushels of lime to the acre, a fertilizer that is at hand everywhere in Maryland, his land is made. I heard of a man who having $1,500 in cash, purchased a farm on credit for $6 or $7 per acre—the whole cost being $2,500. Instead of doing as you would suppose any sensible man would do, pay the $1,500 cash on his debt,—he expended the whole in guano, and applied it 300 lbs. per acre on the worn out fields of his new farm, and sowed on wheat. The result proved he was not so big a ninny as he was generally esteemed. He paid the whole $2,500 with his wheat crop, and improved his land by a good set of clover, at the same time. If, however, the farmer should continue the application of guano without other manures in the quantities above mentioned, the yield will be a diminished one until finally for reasons above stated, if the deductions of science are not all false, the final condition of that land must be worse than the first.

Guano always acts better in soils retentive of moisture, having a large per centage of clay. The ammonia of the guano unites with the clay and is given out to the solvent powers of the water present for the gradual nourishment of the crop. Hence, too, it acts better in moist seasons than in dry, a fact that is true of all other manures. On light soils particularly, if the particles are coarse, its action is not so favorable, and unless the season is very moist it scarcely pays. The reason of this is to be found in the porous nature of such soils, and their high evaporating powers.

Should guano be combined or applied without mixture? This question was much mooted a year or two since in the columns of the American Farmer. The editor contended it should always be combined with plaster to fix the ammonia. A Virginian chemist on the other hand, asserted that such combination called into play chemical affinities which injured its efficacy. The one adduced experiments to prove that it acted well with plaster; the other proved by the same process of reasoning, that it acted well without. I am satisfied that it acts well in either way. On light porous soils, I should, however, combine with plaster or sprinkle with sulphuric acid, and so turn the ammonia into a sulphate which is not volatile. The usual mode of mixing is to turn the guano into a large box, and add 1 bushel plaster to 200 lbs guano, sprinkling with water and stirring till intimately mixed. With large parcels the same may be more conveniently done by spreading the guano and plaster on a tight barn floor, and turning with a shovel, sprinkling with water as before. Some again mix it with strong brine (solution of the chloride of soda) turning the ammonia into a muriate. I am not satisfied that it acts so well in this state as in a sulphate or carbonate, though the brine by adding alkali, in which the guano is deficient, is thus far of advantage.

Should guano be plowed under? This was always insisted on in its first applications. Uncombined, it certainly ought never to be used as a top dressing, and although it ought not to be in contact with the seed, its caustic nature in that case destroying the young plant, yet it ought to be as near the seed as possible. The most approved plan now I believe is to harrow in wheat and guano at one operation. Many of our farmers are now commencing to use the drill which greatly facilitates the application of all concentrated manures.

Should guano be applied to spring crops? My own experience and observation lead me to infer that it does not pay unless the season and soil are favorable. We rarely have a summer sufficiently moist to dissolve the active principles of the guano, and the crop is liable to burn, and on hoed crops where the surface is exposed, evaporation goes on so rapidly that the ammonia is exhaled before the crop matures; and often in its early growth, while the moisture of spring is still in the ground, the luxuriant appearance of the crop leads the farmer to form high expectations that are in the end disappointed—and then all after amelioration of the soil is put out of the question by this mode of using the article. I once sowed 300 lbs. Peruvian guano on an acre of poor ground—soil alluvial, very light but of fine particles. The result was eleven barrels of good corn, or as Cousin Jonathan would express it, 55 bushels shelled corn, the season being favorable.

The following year I sowed oats and could see no difference in the crop where the ground was guanoed and where it had no manure. I think a very large yield of corn might be realized by applying 500 lbs. Peruvian guano to an acre of ground in the fall. In this case a piece of loamy land should be selected, deeply plowed and subsoiled: then as late in the fall as the frost would permit, sow on the guano, intimately mixed with 2½ bushels plaster, and harrow thoroughly. In the spring plow lightly and harrow again, and plant the corn in drills—the stalks 1 foot apart, the rows 3½ feet apart, and the result will be a premium crop at any cattle show.

To the potato crop guano is often applied with the best results, 200 to 300 lbs. per acre in the drills. This crop, however, is so precarious with us that few now attempt to raise more than they need for their own use.

For oats guano is theoretically the very best of manures, as they require much less alkali than wheat. When applied to oats it is sowed with the oats and harrowed *in* in doses of from 100 to 300 lbs. per acre. In favorable seasons the yield is very large. Yet in Maryland not much guano is thus used, the oat crop not being esteemed as profitable under any circumstances.

As a top dressing for the grasses, guano is not much used in our state, in consequence of its volatility, and also of the fact that we do not raise half as much grass as we ought to do, nor take half the pains we ought with what we do raise; but if any of your readers wish to take a premium for timothy, let them mix 100 lbs. Peruvian guano and 100 lbs. nitrate of soda, adding 1 bushel of plaster; let them lie in a heap a week, turning them every day, sprinkling with water to allay the dust, and if he has a tolerable soil and a good set of grass on his land, it matters not how poor it is—the result will astonish him. C. V. *Pikesville, Baltimore county, Md.*

Muck for Manure.

I have a muck meadow, which appears to be made up of vegetable matter of any desirable quantity, very handy to my yards or cultivated lands. I wish to inquire through *The Cultivator*, whether this muck can be made available as a manure for rather dry land, and if so, what is the best mode of preparing it? D. F. *Thetford, Vt.*

The best way to use muck is in mixture with yard manure. If the muck is well dried, it operates beneficially in two ways,—by its own fertilizing ingredients, and by absorbing the liquid manure. It usually contains when wet, about 7 or 8 times its own weight of water—and if made perfectly dry will absorb a like amount of the drainings of stables, cattle yards, &c. If the bed of muck our correspondent speaks of, could be well drained, the muck might be carted off at any convenient season of the year, and placed under a large coarse shed to dry, and to remain so for use. But if the bed cannot be drained, it should be drawn out or thrown up into heaps during the driest season of the year (which is usually immediately after wheat harvest,) if on a coarse plank or slab floor all the better, and then covered with some kind of roof or thatching. This will keep it dry till wanted for littering stables and yards in winter, and if well dried, it will not freeze, but may be drawn and spread during the coldest days.

Muck may be likewise used along with loam and turf to great advantage in forming compost heaps. The upper or turfy surface of the meadow will be found admirably fitted for this purpose. Make a layer of manure, a few feet wide and several rods long, and about five or six inches thick; then cover this with turf and muck nearly double in quantity; then another layer of manure and so on. This is best done in the spring of the year, and afterwards during the season as fast as the manure accumulates. After it has lain a few months, or the next autumn or spring, plow and harrow this heap over with a yoke of oxen so as to intermix it thoroughly, when it will be ready for application to any crop benefited by manure, and it will be found to constitute a most excellent fertilizer—fully equal to ordinary half-rotted yard manure. If the successive layers of manure and turf, muck, &c., are made thinner and more frequently than we have indicated, less intermixing will be subsequently required.

Mice in Unthreshed Grain.

Will you please inform me how to prevent mice from destroying unthreshed grain in the barn? I think I have lost 100 bushels by these vermin the last two years. I have a threshing mill, and thresh my grain as I want the straw for fodder for my cattle, which I feed to them, with turneps, boiled carrots, chaff, &c. J. S. *St. Davids, N. B.*

We know of but two good ways to keep rats from barns, viz: 1. The employment of at least half a dozen good *cats*, of some first-rate ratting breed, for there is much difference in them; and the other, and probably most complete cure is a couple of genuine rat-terriers. LEWIS F. ALLEN, of Black Rock, N. Y., informs us that the latter remedy has proved perfectly effectual in his extensive barns, where these depredators swarmed by hundreds. The dogs watched their holes, and in a few weeks none could be found nor traced on the premises.

Strychnine and arsenic will kill rats very effectually, especially the latter; but we do not like such deadly poisons in close proximity to breadstuffs, and through which the rats may intermix it.

We have been informed that hideous noises, such as from drums and other similar din-creators, have frightened off rats for a time, provided the music is kept up for an hour or two without intermission.

LEDYARD TOWN AG. SOCIETY.—A Town Agricultural Society was organized in our town, Ledyard, the 7th of the present month; and the following officers were appointed for the ensuing year, viz:

President—SAMUEL S. COONLY.
Vice-Presidents—Augustus C. Boyer, James Avery.
Secretary—Thomas Gould.
Treasurer—Benjamin Baldwin.

A Fair will be held in the month of September, and books, periodicals and newspapers (agricultural) are to be awarded as premiums. THOMAS GOULD.

F. C. L. and Prof. Mapes.

It will be seen from the following, that our correspondent, "F. C. L.," has deemed it proper to reply, under his own proper signature, to the characteristic remarks of the editor of the *Working Farmer*, to which we alluded last week. Mr. Frost will, we trust, excuse us for omitting a portion of his letter relating to matters not strictly bearing upon the question of the value of the "improved superphosphate of lime." The "professor" has already more explanations to make, to place himself right before the public, than he is likely to attend to for some time to come; and we have no desire unnecessarily to add to the burden now pressing upon him :—

Messrs. Editors—I should not have troubled you with any further remarks upon "Professor" Mapes' superphosphate of lime, but for his unwarrantable attack upon you in his paper of the current month, which constrains me to reply to him under my own proper signature.

In the first part of his article he very strangely accuses you and Mr. De Burgh, of concocting and publishing my former letter to you, containing the result of my experiments with his superphosphate of lime. Now I beg leave to assure you of the entire truth of all I said before, and that I "nothing extenuated, nor aught set down in malice," although I do feel that my $100 was very poorly invested. Again, the "Professor" says that he cannot find any subscriber at Rahway, bearing the initials of F. C. L.; but perhaps Mr. Mc Cready *can* find that L. C. Frost did formerly subscribe to the Working Farmer; and that he also sold and sent to the same address, more than one lot of Phosphate. He also boldly asserts, that no one of those initials bought Phosphate from his factory. In reply I would ask the "Professor" if it is customary or necessary to keep there, a record of the names of all parties, who buy and pay for his manure, or are his books so kept that every cash customer's name is entered? In my case there certainly was no such entry made. The professor then quotes my experiment with his superphosphate, in comparison with guano and hog manure, on corn, made side by side, and the result of which I gave you in my first communication; but he very wisely abstains from making any reply, or attempting any contradiction. He likewise accuses me of not giving the names of my neighbors, whose experience coincides with my own. He can see that I am not ashamed to give my experiments under my own signature; but he must know that one naturally has some delicacy in dragging his neighbors into a public discussion; although the "Professor" himself is not much troubled with either modesty or delicacy, when he boldly asserts that I am guilty of writing you a "vile tissue of misstatements," nor does it savor much of the gentleman. That kind of argument is generally resorted to by lawyers in special pleading, when they have a very bad case, with but few facts to sustain it.

The "Professor" also names some gentlemen, whom he facetiously calls neighbors of mine, occupying as he says the same kind of soil. One of these neighbors lives in Monmouth co., 50 miles distant, one in Patterson 20 miles, and others at distances varying from 10 to 20 miles from Rahway, and all of them with soils *entirely dissimilar*. I would inform the Professor, that our county is more thickly settled than he has any idea of; and these gentlemen do not live within visiting distance of me; but I defy him to get one favorable report from any farmer within three miles of his factory, who has used the *same* kind of Phosphate he sells to the public generally—not from some friend to whom he has sent a few bags of *genuine* superphosphate, for the purpose of getting his card to publish. I refer him to vol. 1, page 17, of the Working Farmer, where he calls a farmer, who has not a chemical education, a "*mere laboror*," but not a farmer, and can also point out many other places in his own columns, where he asserts the same thing.

In conclusion Messrs. Editors, I would again assure you of the entire truth of my former statements, and will say to the "Professor" that his long review and numerous letters do not and cannot disprove them; and he will bear in mind, that accusing you of concocting and publishing, and me of furnishing you with "a vile tissue of misstatements," will add nothing to his reputation as a scientific man, or as a lover of fair and open discussion upon the various *humbugs* of the day. As regards Mr. De Burgh's Phosphate, I have never used any of it, and of course cannot speak of its merits. Yours truly, L. C. Frost. *Rahay, N. J.*

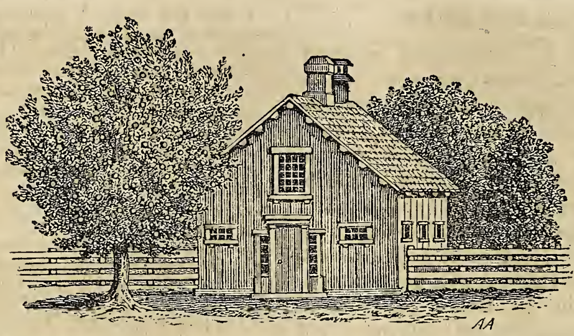
Manuring Fruit Trees.

You have mentioned that a compost made of turf, stable manure, and ashes, was good for young peach and apple trees. Will you please inform me how much should be used? also, when should it be put on? also, what are the best fall and winter apples? P. W. L. *Hampshire county, Mass.*

Manures for fruit trees are best applied in autumn, the fertilizing portions soaking well through the soil by the commencement of growth the following spring. It is nearly as well to apply it early in spring, and much better than waiting till another autumn. The quantity must depend entirely on the degree of previous fertility, and the size of the tree. On a tolerably rich soil in western New-York, we have applied a one-horse cart-load of such compost to a hole seven feet in diameter, before planting the young apple tree, and have had a *very rapid* and healthy subsequent growth in the tree. One or two ordinary cart-loads of well rotted compost worked into the soil at the residence of our correspondent, over a space of a rod or two in diameter for a large tree, or one half or one fourth that quantity for trees proportionately young, would be by no means too much, and would doubtless greatly increase the quantity and quality of the crop. On richer soils, and under hotter suns, for instance in central Illinois, such heavy manuring would probably be not only unnecessary, but injurious. Peach trees do not need so much manuring as apple trees, but depend more on keeping the soil clear and mellow by constant cultivation.

Churning by Steam Power.

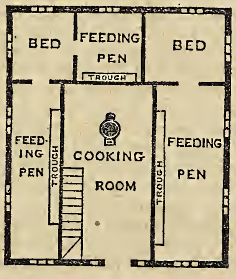
Messrs. Editors—In the *Country Gentleman* of Feb. 9, "A New Subscriber" wishes to know whether steam power is in use in any of the large dairies, and what the opinion is in relation to its safety and utility as compared with other modes, cost, &c. In answer, I will say that I have used steam power for churning and other purposes, for two years. My engine, (made by Messrs. Hoard & Bradford, Watertown, N. Y.—2-horse power—price, two years ago, $160,) is amply sufficient for any amount of churning, with all the ease and safety of boiling a tea kettle in a common stove, requiring no large amount of steam; while it will saw wood, thresh, cut feed, turn grindstone, turn washing machines, saw and bore fence caps, &c., &c., to good advantage. I have sawed a cord of soft wood in nine minutes, and 14 cords of hard wood in half a day—can thresh 250 to 300 bushels of oats per day, and other grain in proportion. I had previously churned by horse power, (having no access to water power,) but consider the steam far preferable both for convenience and economy. Should not like to do without it. G. A. Hanchet. *West Stockholm, N. Y.*



Plan of a Piggery.

A correspondent at Middle Granville, N. Y. asks for a plan and description of a hog-house, and believing such a plan may be of essential use to many of our readers, we furnish the accompanying design. Of the many we have seen, this design, which we copy in part from several now in use, with some additions of our own, suits us the best.

The size may vary with the number of animals to be accommodated; twenty by twenty-five feet on the ground will afford good accommodation for twenty-five or thirty pigs. The lower floor, represented in the "*plan*," shows the arrangement for their accommodation; the larger animals occupy the wider pen on the right, and the smaller the narrower pen on the left; and being kept entirely separate, there can be no danger of the weaker suffering from the strong; or, as sometimes happens when there are many of the smaller, being pressed or smothered to death in their beds. For the accommodation of the smallest in size, the central feeding-pen may be made to admit these only, by a sliding entrance graduated to their exact size, and excluding the larger. Or, sucking-pigs may be kept here, and the dam admitted for regular meals, thus precluding the usual danger of death during night to the young animals by lying upon them. They may be let out into separate yards, attached to the building.



The cooking room is in the most convenient position for feeding out. The spouts for carrying the food into the troughs should be large enough to admit its free passage, and wide enough for all parts to be filled at once; and its inner edges should be trimmed with sheet-iron to prevent the animals gnawing it. The troughs should be made of the best hard wood plank, (nothing is better than white oak,) and they should be securely fastened to the floor, which should be hard plank, laid smooth, and made tight, so as to admit of the utmost facility of cleaning. The inner partitions should be made of similar material, and a lining of hard plank should extend all around the inside as high as the bottom of the windows. Without this firm and secure provision, the walls would soon become destroyed by these restless animals.

The food may be cooked in one or more of Mott's furnaces, which will boil a large amount of water with a very small quantity of wood; and in large establishments two of these may be kept constantly employed, the food being cooked in one while it is fed out from the other. The pipe from the furnace passes through the floor above, and by a single elbow enters the brick chimney, which is built upon the second floor. A ventilator, as large as a large stove-pipe, surmounted with one of Emerson's caps, or some other equally good, carries off the bad air from the apartments below.

The upper story is used for storing the food, which by means of a square wooden spout with sliding valve, may be conducted from a hopper directly into the boiler below. If the ground at the back of the building should be rising, a platform may be laid, on which the materials for food may be carted or wheeled into the back upper door, (opposite the large window represented in the view,) otherwise a pully may be fixed over this door for the same object.

The dislike which many persons have to these animals and to their dirty habits, is in a great measure owing to their owner's negligence, in not providing them clean and comfortable quarters. It has been justly remarked that the pig is not positively an admirer of dirt, but there are certain comforts he is determined to have in spite of dirt, if he can get them. It usually happens, however, that the scanty accommodations with which he is furnished, provide him with little of the comforts, and plenty of the dirt. In short, no animal is so wretchedly cared for as the pig; very few of them receive comfortable shelter, and still fewer enjoy the luxury of cleanliness. Fortunately, there are a few good managers who have proved that a pig-house may be kept as clean and sweet as any other part of the premises; and who have also proved that filth is a positive discomfort even to these animals, for they are found to thrive and fatten decidedly faster when strict cleanliness is preserved. Even the practice of daily currying hogs has been found by actual experiment to accelerate their fattening, the food remaining the same.

To assist the preservation of cleanliness in every part of the building here described, it is well lighted with windows. They should be made to slide, so as to be opened for ventilation in mild weather. For an additional safeguard, and for excluding an excess of light at any time, they may be furnished with board shutters sliding horizontally inside. In addition to cleaning the pens twice a day, it will be necessary to keep the floor sprinkled with straw, well dried peat or turf, or other similar material to absorb the watery portions of the manure. The contents should not be thrown out of a window or door, forming an unsightly pile near the building, but wheeled off with a wheelbarrow to a proper distance; and as this manure is of a very fertilizing character, and therefore especially worthy of preservation, it should be deposited so as to form a neat compost heap, to which additional layers of turf should be successively added, unless the bedding of the animals supplies all the needed absorbents.

The cost of such a building as this, framed of strong timber, covered with inch and-a-half vertical plank and battened and whitewashed with two coats of lime, will vary from one hundred and fifty to two hundred dollars, if of the size already mentioned, that is twenty by twenty-five feet. For large establishments, larger dimensions and a greater number of subdivisions of the apartments may be necessary, the general arrangement remaining the same. It may in such a case be most economical to dig a cellar beneath, to be occupied with a steam-boiler, from which the steam may pass up through a pipe into a tight plank box above, containing the food to be steamed, and from which, when cooked, it may be shovelled at once into the feeding troughs. Several experimental farmers have successfully adopted the practice of steaming their corn unground, and even in the ear, a process which, however, requires several hours for its completion, but which saves toll and carrying to mill, but we are not informed that any accurate experiments have been instituted to show the precise amount of saving effected by this process.

* * *

Profitable Sheep.—Mr. J. Hurlbutt, Gale's Ferry, Conn., informs us that in the fall of 1852, he had a flock of twenty-one sheep, of what are called native breed, which he kept on his meadows through the winter, only feeding them with hay when there was snow on the ground. Through the month of April, they were fed four quarts of oats per day, and then turned on an old pasture, where they were kept through the summer. They produced eighty three pounds of wool which was sold at fifty cents per lb. making $41,50, and raised twenty-four lambs which averaged $2 each, making an average income of $4,25 per head. Mr. H. adds—"I would just say that I never allow butchers to pick out the best lambs or the fattest sheep."

The Carnation, the Picotee and Pink.

The flowers we have selected for this paper, may be called universal favorites. Who is there who has not admired in their day some member of this sweet-scented family? Perhaps the pet of a mother or sister at the old homestead, helping by its cheerfulness, or delightful fragrance of a balmy summer's evening, to soothe the cares and toils of every-day life.

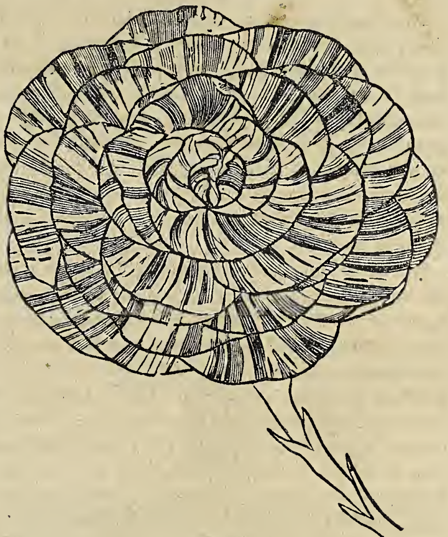


Fig. 2.

Few flowers can boast of more ardent admirers in the mother country, and even in this they have had their share of votaries. To grow them really fine, requires a light sandy loam; but any garden soil, provided it is not stiff and wet, will grow them for the purpose we are here speaking of, the flower garden.

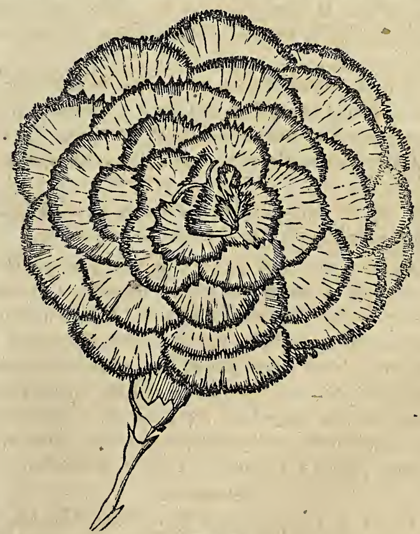


Fig. 3.

The Carnation—*Dianthus caryophyllus*—is divided into *Flakes* and *Bizarres;* the former distinguished by having two colors, with their stripes running quite through and along the petals—the latter, striped with not fewer than three colors, and irregularly spotted, (fig. 2.)

The Picotee is also a variety of D. caryophyllus, and is divided by florists into *red edged*, *purple edged*, *rose* and *scarlet edged*, and *yellow-ground* Picotees, (fig. 3.)

THE PINK—*Dianthus hortensis*—is a distinct species of some botanists; by others, it is considered only a variety of the preceding, while no less an authority than Decandolle claims the *Dianthus plumarius*, as its original type. Who can decide when doctors disagreee? Which is right, does not materially concern us at the present time; enough that it is the best of the three mentioned for standing hard usage, and must be badly treated indeed, not to give us at least a pretty border flower.

The whole are readily propagated by layers about the middle or end of July, as also by pipings—that is, cuttings of the young grass, which should be inserted under bell or hand glasses in the open air, and shaded from the sun. Seed can also be procured of the principal seedsmen, and we have known instances of their coming exceeding double and pretty. It should be sown as soon as possible in a gentle heat, and kept in pots till all danger of spring frosts is over; then transferred to the flower border, or a piece of ground made good by copious additions of the top sod of a sandy loam, and some well rotted manure. By careful attention they will flower this reason, when the good may be selected and propagated from, and the worthless allowed to take their chance among other perennials. It may be sown in the natural ground the middle of April, but will scarcely flower the first season.

If it is desired to grow these gems to perfection, a border should be selected, and about six inches of turfy loam, dung and sand—one-half of the former, the rest of the two latter, placed on, and well incorporated with the garden soil.

Plant the Carnations and Picotees 12 to 15 inches apart—the Pinks about 8 inches.

At the approach of winter they should receive some protection; a few boards nailed together, and some sash placed on these would be best. Where that can not be done, some loose and light material should be carefully placed round about them, just leaving the crowns of the plants protruding, and the covering kept from blowing away by a few pegs. They should be uncovered in the spring as soon as all danger of frost is over. EDGAR SANDERS. *Albany, March* 20.

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HON. J. S. PETTIBONE, of Manchester, Vt., has invented a very simple contrivance for sharpening sap spiles, by means of which the work can be done with great rapidity and ease. One of the instruments can be seen at the Agricultural Rooms in the old State Hall in this city.

Market Apples.

EDS. CO. GENTLEMAN—It is my intention to set out a large orchard of apple trees in the spring, numbering over 300 trees, but only of five kinds, and those to be *all market kinds*—two for summer, two for fall and one for winter. Be so kind as to name for me the five kinds according to your excellent judgment, and by which I shall be hereafter remunerated by crops. If you think the Gravenstein is worthy a place as a fall kind, taking all things into consideration, please name it as one of the kinds—not otherwise. Yours truly, AUSTIN J. ROBERTS. *Middleboro, Mass.*

In selecting sorts for profitable marketing, there is one *indispensible requisite*, without which no fruit, however excellent, will answer for adoption. This is a uniformly *fair* surface. If this can be combined with first rate quality, all the better; but if the highest flavor cannot be had, a lower standard must be admitted in order to secure a smooth exterior. This necessity is becoming more and more apparent, as apples of late years increase in scabbiness and imperfect form.

For the two summer varieties, the *Red Astrachan* and *Sops of Wine* will probably prove best, unless the former should prove generally liable to attacks of the curculio more than most other sorts, as has been found in some places. The Sops of Wine is remarkable for its fair form. The trees of both sorts are fine growers.

The two fairest and most uniformly productive autumn apples, are probably the *Lowell* and *Porter* for mid-autumn, and the *Late Strawberry* for early autumn. The two first-named are rather slow growers; the Strawberry is a handsome and free grower, and profusely productive. The *productiveness* of the *Gravenstein* for all places is yet to be proved—otherwise it would stand at the head of the autumn list. The *Duchess of Oldenburgh* is a good, and a very fair and handsome apple, and will probably be productive.

For winter, the *Rhode Island Greening* and the *Baldwin* are unquestionably the two best market apples in America. The Greening is more uniform in quality, and the fruit more apt to be of good size and fair surface under all circumstances and all kinds of treatment, and in all localities; while the Baldwin is a handsomer grower, and a better bearer while young.

With this information, our correspondent will be enabled to select such of the sorts we have named as may best suit his wishes.

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Early Cucumbers.

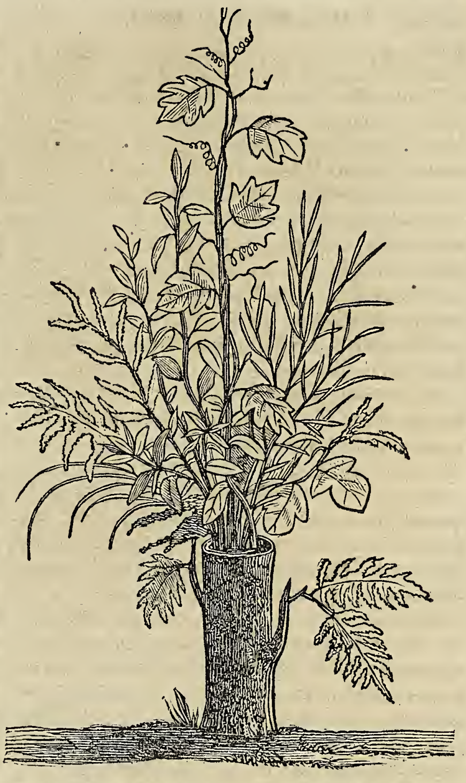
Plant in hot-beds on pieces of inverted turf, that may be removed and set in the open ground, as soon as the weather will render it safe. Or plant in the shell of a rutabaga that has had its pulp scraped out and then filled with rich mould. The shell will soon decay and the roots pass beyond. There are two good ways to keep off the bugs. One is to lay four bricks on edges round the plants and a pane of glass over them; the other is to make wooden boxes six or eight inches square and cover with netting. About ninety-nine hundredths of all the plants that come up are eaten by these depredators in the country at large—either of these contrivances will save them all.

Horticultural Humbugs.

The recent grave announcement in the proceedings of the United States Agricultural Society, that a certain learned (?) "professor," and a prominent actor in the deliberations of that body, had presented a head of wheat and chess growing on the same root, reminds us of several similar wonders, which have been at various times announced to the world. The question very naturally arises, whether this is the first example of half transmuted wheat that has ever occurred, and why,—if it is so very common for wheat to take a fancy to pass generic boundaries, and become chess,—it should be so very rarely caught in the act? Why, among the million farmers of this continent, each having in his field a thousand million stalks of wheat, should not more be found, who can catch the cunning plant in the act of dodging out of its own proper territories and invading those of the chess plant? A whole field of wheat is converted to countless myriads of plants of chess—now, when is this done, at what time of day or night—why cannot numerous specimens be found of such as are in a transition state, instead of a single example, so rare that it must be sent from Livingston county, N. Y., to Newark, N. J., and thence to be exhibited before the most learned agricultural body in America, as a thing that none of them had ever before witnessed?

But leaving more learned men to explain this difficulty, our present purpose is to mention a few other wonders, and how they are manufactured. We have heard of grafting the peach on the willow, and that *when* the tree thus produced bears peaches, they will be a uniform mass of pulp without any stone! We have also heard that at a certain day of the moon, the peach might be grafted into the butternut, which we do not question, although we shall not guaranty the success of the job. Many have heard of placing the halves of two dissimilar apple-buds in contact, to produce a sweet-and-sour apple, but we could never yet find the man who would say that *he* had seen the operation successfully performed, he had only heard it from another.* But we shall not trouble ourselves and readers to account for what only exists by flying report; we have only to do at present with actually exhibited wonders. In describing some of these, we cannot do better than to quote from a recent article in the London *Gardener's Chronicle:*—

Some 25 years since an English nobleman purchased in Italy, for a large sum, from an honest dealer there, a marvellous plant, which, as he thought confirmed the old VIRGILIAN tale of Apples growing upon Plane trees. At least it appeared to his lordship to negative the general belief that dissimilar species cannot be made to unite by grafting; for here he had a Jasmine, a Honeysuckle, a Myrtle, and an Olive, all grafted on an Orange tree and flourshing luxuriantly. In due time the specimen reached England, and was for many months the admiration of the intelligent visitors at * * *.



We need not say that all these tales, like the ancient authorities so learnedly quoted by our calassical friend, are mere fables; and that the examples by which they are supported, whether new or old, are instances of fraud and credulity.

The trick by means of which are obtained such trees as that to which we adverted is now perfectly understood, and 30 years since was explained, under the name of "Impostors Grafting," by the late ANDRE THOUIN, from whose article *Greffe* in the *Nouveau Cours d'Agriculture* (1822), the following is an extract:—

"The so-called *greffe des charlatans* is nothing more than a plantation formed within the trunk of a tree, which has been hollowed out longitudinally quite into the ground below its roots. One or more young plants furnished with good roots are drawn through the trunk, and their roots are then covered with rich vegetable mould. These plants grow vigorously, fill up the cavity in the trunk with their stems, which squeeze closely together and eventually form at the top of the opening a swelling which perfectly resembles that produced by grafting.

"In this way was most probably formed the group of trees which PLINY the naturalist observed in the gardens of LUCULLUS at Tivoli, and which is described in his 'Natural History.' On the trunk of one tree he saw branches, some of which produced Pears, others Figs, Apples, Plums, Olives, Almonds, Grapes, &c.; but he adds, a little farther on, that this wonderful tree, which he considered as produced by the art of grafting, did not live long, and that it died some years after he first examined it.

M. THOUIN further tells us that he himself tried the operation with perfect success upon both a Lime and an Ash tree a foot in diameter. He contrived to give both of them heads consisting of Plums, Hazels, wild and cultivated Services, Walnuts, Peaches, and Vines, the branches of which were thoroughly interlaced. Of one of these he gives a figure which we reproduce, and which perfectly illustrates the system.

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* Many are familiar with what is termed the "sweet-and-sour" apple, caused by a sort of diseased or imperfectly developed pulp on one side, but never by two buds united after being cut directly through the heart.

New Work on Fruit.

ELLIOTT'S FRUIT BOOK; or the American Fruit Grower's Guide in the Orchard and Garden. By F. R. Elliott. New-York: C. M. Saxton, 1854.

This new work on fruits and their culture, which has been for some time expected, has been recently published. It is a handsome duodecimo of about 500 pages. It is chiefly occupied with descriptions of the varieties of fruit, native and introduced, which have been more or less cultivated in this country. This constitutes its great value, on which the author has assiduously labored for several years. About one-fifth part or the remainder is occupied with general and particular directions for culture, modes of propagation, and practical remarks.

The varieties of each fruit are divided into three distinct classes, which are treated of separately. First, we are furnished with those "worthy of general cultivation," which are distinctly described, mostly in connexion with figures, representing the fruit as cut through the middle, exhibiting the core and seeds. Next comes the list "for amateur culture," in smaller type; and lastly those "unworthy of cultivation," which are very briefly noticed or described.

This work, in some respects, possesses advantages over any of its predecessors. The author has had the advantage of deriving information from all previous sources, added to his own extensive knowledge of western fruits, particularly of the apples of the western states, and on the latter branch of the subject, much that is interesting and valuable may be found.

He has introduced some decided improvements in nomenclature, especially in translating most of the French names. A few, however, we fear will hardly be adopted, such for example as *White Dean*, for *White Doyenné* (p. 306,) *Summer Dean*, for *Summer Doyenné*, &c. An improvement is made by dropping the word "Melocoton" from the names of some peaches, long enough without it; and if the word "Beurré" had been stricken off the names of most pears to which it is attached, it would have been still better, for as commonly used, it has very little meaning. We observe occasional errors in synonyms; for example, *Beurré gris d'Hiver Nouveau*, is given as a synonym of *Easter Beurré; Ne plus Meuris*, (a small third-rate winter pear) as a synonym of *Beurré d'Anjou;* and *Long Green* and *Long Green of Autumn* appear to be confounded together. *Sops of Wine* and *Sapson* apple are made identical.* The author suspects the Vandevere and Smokehouse to be identical, but they not only differ in the season of maturity and in quality, but totally in their manner of growth. These are, however, only occasional exceptions to the general accuracy of the work.

We cannot quite agree with the author in all his classification of fruits worthy of general cultivation, and otherwise; more especially where he introduces among the former, some quite new varieties which have as yet had but very limited trial. For example, there are *thirty* sorts of the cherry described as worthy of general cultivation, *nineteen* of which are Dr. Kirtland's new seedlings at Cleveland, described now and formerly by the author, and only *eleven* in all, of the whole list of cherries previously known—the Mayduke, Holland Bigarreau, and Graffion, are placed among those for amateur cultivation only. We know some of Kirtland's seedlings are of great excellence, and presume the rest are, but they need more trial. We observe the *Druid Hill* peach is not even allowed a place in the amateur's list, but is rejected as unworthy of any cultivation. One other point we ought not to omit—the Glossary of terms is copied without quotation or reference, almost word for word, from the entirely original glossary in the American Fruit Culturist. We presume this was an inadvertence.*

The great mass of the matter, however, is marked with correctness and with much knowledge of fruits, and the work will of course stand at the head, so far as its descriptions of western varieties are concerned; and as such we strongly commend it to the fruit-raising portion of the community.

Answers to Inquiries.

PLANTING EVERGREEN SEEDS.—(*Wm. Tinker, 2d.*) Sow evergreen seeds in the spring as soon as active vegetation generally commences. The seeds need no preparation before planting. They should be covered rather thinly with light rich mould, which should be kept rather moist at all times, and the young plants, if not before, must be wholly protected from the sun's rays as soon as up, and for many weeks afterwards.

GRAFTING THE PEAR ON LARGE STOCKS OF COMMON QUINCE.—(*Dr. D. H. Hallock, Long Island.*) We cannot recommend this practice, except by way of experiment. The wind sometimes breaks the graft from the stock, under ordinary treatment. Grafting is regarded as forming a less firm junction than budding small stocks. Large stocks an inch or two in diameter would render the union more imperfect. The experiment may be tried, however, and the Angouleme, Louise Bonne Jersey and Vicar of Winkfield pear, will probably succeed tolerably well with the common quince. The union would be smoother and more perfect if performed according to the directions for grafting large stocks given ou p. 413 of the ninth edition of the American Fruit Culturist, and one or two of the previous editions. We should prefer grafting at the surface of the ground. We should not attempt the Bartlett, Seckel and Winter Nelis (named by our correspondent,) in this way—their growth on the quince is too slow.

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* The distinctions in these sorts are pointed out in the *later editions* of some other pomological works.

† If we mistake not, from seeing a former expression of the author of the work before us, he had received an impression that the American Fruit Culturist had copied largely, and was not a strictly original work. He may therefore have sincerely believed that portions of it had thus become common property, and for which it was not necessary to give credit. Strange as it may appear, such a notion has prevailed in the minds of some, from causes not necessary now to mention. The singular error of such a notion is obvious, when the work is compared with some other treatises of a high character, such for example as Downing's Fruits and Fruit Trees, which no one ever charged with fault in this particular. Yet three-fourths of his illustrations in culture are the identical figures of Lindley and Loudon; while those in the Fruit Culturist were drawn directly from nature. Downing's work, in the *arrangement* of its first part, is an exact copy from Kenrick, and in its last, from Lindley's Guide. The arrangement of the Fruit Culturist was copied from no work whatever. The remark has been made that much of the matter of the Fruit Culturist was taken from the Horticulturist; yet all its quotations from that work, (credit being always given, and the consent of its *proprietor* obtained,) all did not amount in extent to a *single quotation* from Hovey's Magazine in Downing's work. We could adduce a long list of similar proofs, showing the entire fallacy of the opinion above alluded to, which seems indeed to have been originated for a certain reason, only on account of its utter absurdity. Yet some, we discover, adopted it without examination.

Fencing out the Curculio.—(*J. S., Pa.*) W. Manice, of Long Island, constructed many years ago a tight board fence around his plum orchard, about nine feet high, with tight board gates. The curculios did not fly high enough to enter, many striking the sides of the fence and falling outside. An acquaintance who visited the garden when in full fruit informed us that all the trees *within* the enclosure were heavily loaded with plums, at the same time he observed a tree outside that had lost every specimen.

Select List of Roses, Phloxes, &c.

I would like to know the *six* really finest and distinct varieties each, of Hybrid China, Hybrid Perpetual, Bourbon, Noisette, and Tea roses; phloxes, verbenas, and Fuchsias—also the 12 finest perfectly distinct Dahlias. A. Williams. *Galesburg, Ill., March*, 1854.

Of the Hybrid China, or summer roses, for a distinct list varying from almost black to pure white, none are perhaps superior to *George IV.*, dark velvet crimson; *Roi de Prusse*, very compact, pale purple; *Triomphe d'Abbeville*, deep brilliant red, very double; *Fulgens*, intensely bright crimson; *Bonne Genevive*, clear light red, compact and very delicate; and *Madame Plantier*, pure snowy white. There are many others, scarcely if any inferior to these.

Hybrid Perpetuals—*Baron Prevost*, large, bright rose; *La Reine*, large, purplish rose, remarkable for its tall growth; *Geant des Batailles*, small, but unequaled for its brilliant crimson; *Marquise Bocella*, light pink (rather tender;) *Duchess of Sutherland*, light rose, vigorous grower; to which may be added one of the white sorts, such as Blanche Vibert, Pauline Bonaparte, &c., which, however, we have never been successful in cultivating. There are some other sorts as fine in flowers as these, but with other defects—for instance, Prince Albert is a beautiful brilliant purple-crimson, but very slow grower; Louis Bonaparte, fine deep red, but tender, &c.

Bourbon—*Souvenir Malmaison* stands at the head, as a very large, very compact, delicate, fragrant, light creamy pink flower, and a constant bloomer—but it is a very slow grower; *Gen. Dubourg*, far inferior in the beauty of its flowers, but exceeding nearly every other perpetual for its uninterrupted flowering till frost, and its exceedingly vigorous growth; *Gloire des Rosamenes*, loose in form, and rather tender, but unequaled in its brilliant crimson color; *Paul Joseph*, bright scarlet; *Madame Desprez*, purplish rose, large and in clusters; *Julie de Loyne*, for its white color.

Noisettes—*Amie Vibert*, pure white; *Lamarque*, pale yellow, large and fragrant; *Solfaterre*, yellow; *Fellenberg*, bright red, a constant and profuse bloomer; *Champney*, small, light rose, valuable for its strong and hardy growth, and blooming almost till winter in open ground; *Walter Scott*, deep rose. The Augusta and Chromatella are both very fine, but being nearly the color of the Solfaterre, they are omitted to give place to greater variety.

Phloxes—*Van Houtii*, very distinctly striped white and purple, and often blooming many weeks; *Speciosa*, fine reddish purple, with crimson eye, strong grower and showy; *Fleure de Marie*, white with a pink eye; *Harrisoni*, clear white; *Reine Louise*, delicately striped; and the native species *P. maculata*, which flowers earlier than the others, and forms fine masses. There are several early species of much beauty, such as the common *P. subulata* or moss pink; *P. nivalis*, small white; *P. stolonifera*, fine red, &c.

Of the Verbenas and Dahlias, there have been so many varieties originated of late years, with which we are but slightly acquainted or have no knowledge at all, that we prefer leaving select lists to some of our correspondents who have cultivated them extensively.

Best Wax for Grafting.

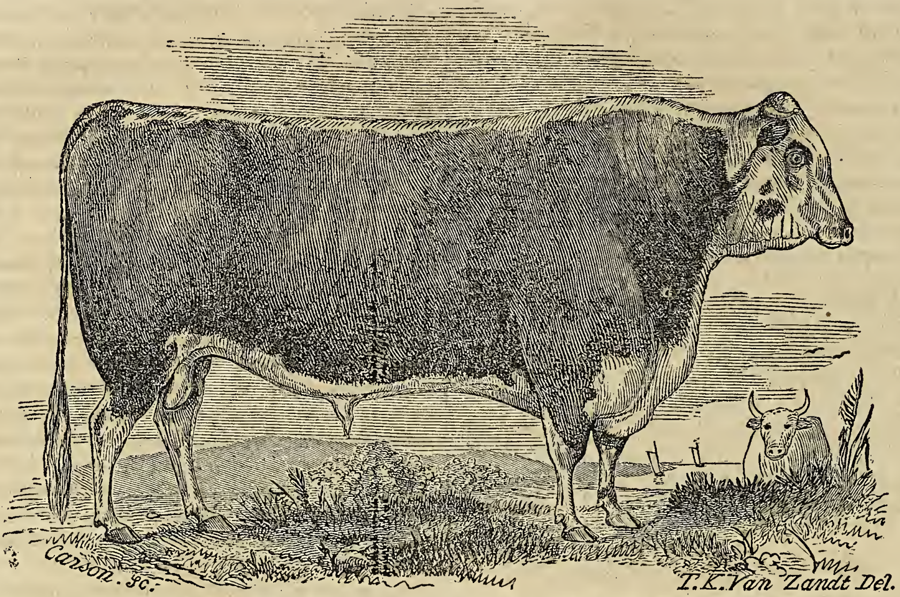
Eds. Co. Gent.—As the season for grafting is at hand or near, many wish to know the composition of the best grafting wax. I therefore send you a receipt, not because it is new, but because it is old, the most common, and the one preferred generally by those of extensive experience. It was mentioned last spring in your paper (Co. Gent., vol. 1, pp. 183, 215.) The formulas given in vol. 1, p. 279, and vol. 3, p. 171, I think not good, especially the latter; it melts too easily for our climate. The use of linseed oil appears not to be attended by as good results as many have supposed. I use, by weight,

4 parts rosin, (the best is preferable,)
2 " beeswax,
1 " tallow,

Melted well together—thrown while hot into cold water, and when cool enough, worked well with the hands. This wax is cheap, is soft enough to spread easily, yet hard enough to withstand the heat of our hotest summers without melting, and withal very durable. It may be kept several years—(I know not how many, certainly three or four,) without losing its essential properties. The same may be used for covering the wounds made in pruning or after budding. Yours truly, W. H. B. *Ovid, N. Y., March* 21, 1854.

Profitable Strawberry Bed.

Mr. Tucker—I am something of a strawberry cultivator, and to show you how well I succeed, I can say that I have sold off from 25 rods of ground, including the alleys, $215 worth, which is over $1,300 to the acre. They were sold at 20 cents a quart, which I think is doing well for a new beginner. L. A. Brown. *West Haven, Ct.*


Carson. Sc.
T.K.Van Zandt Del.

Cardinal Wiseman—a Hereford Bull Imported and Owned by E. Corning, Jr., Albany.

We give above a cut of this animal, though it hardly does him justice. Mr. Corning has on his farm a small herd of very superior Herefords, a breed noted for their size, symmetry of form, and tendency to fatten easily. The animals were selected with great care from the best herds in England, by Mr. CORNING and B. P. JOHNSON, Secretary of State Ag. Society. We subjoin the pedigree:—

"*Cardinal Wiseman*" was imported in the fall of 1851, from the herd of Rev. Mr. Smythie—calved August 19, 1850—sired by Expectation, out of Wisdom, by Woodstock—grand-dam by Young Favorite, out of Mr. Tully's Tredegar prize heifer. (See Hereford Herd Book.) He has received the first prize in his class for two successive years at the Fair of the N. Y. State Ag. Society.

Quarter-ill in Cattle.

MR. TUCKER—I have lost four yearling calves within the last two weeks, by a disease which I am wholly unacquainted with, nor can I gain much information in regard to it. Some call it the "black leg;" others call it "the speed," which name I think very appropriate, as they all died within twelve hours after I first noticed that they were affected. The first one that died I could see nothing the matter with, only that it refused to eat. It walked around till within one hour before it died. When I came to skin it, clotted blood appeared all along the back, between the skin and flesh. The others when first discovered, appeared stiff in their shoulders, and died in a few hours. Mortification had taken place in those shoulders that were affected before they died. I am anxious to learn the cause, name, and the remedy for this disease—also whether it is infectious or not. Any information in regard to it, through the columns of the *Country Gentleman*, will be thankfully received by A SUBSCRIBER. *Fulton co., N. Y., March* 22, 1854.

Our correspondent has not given the symptoms nor described the nature of the disease with sufficient accuracy to enable us to decide with certainty in relation to it. We presume, however, that it is one of the phases of what is called "quarter-ill," "joint murrain," "black leg," &c., and for which we know of no treatment promising much hope of a cure. Youatt recommends liberal bleeding and purging, while other eminent veterinarians strongly object to this course. We have had on hand for some time, a very interesting paper on this subject, by our correspondent Dr. W. A. CUMING, veterinary surgeon, New-Brunswick, which it is our intention to publish as soon as we can make room for it. He concludes his essay as follows:

"As we have already seen the course of the disease to be asthenic, so coma is always one of the immediate precursors of death, and the treatment applicable to both conditions is of the stimulating kind—stimulants and excitants, both local and general. As general stimulants, alcohol in any of its ordinary diluted forms—Spirit Eth. Nit., Ol. Terib., or Aqua-ammonia dilute, may be used; and, as local applications, bathing with sharp hot water, friction with mustard, turpentine, or some other irritant, or the application over the part, of the laundress' iron at a heat less than sufficient to injure the skin. Such are the means that the character of the disease seems to indicate, and that, on trial, have been found to show the greatest appearance of being of use; but the chances of recovery are so slender, that, unless attempted for the pure love of practice, there are but few who will trouble themselves with the curative treatment of quarter-ill."

* * *

A box 4 inches by 4 inches square, and 4-1 inches deep, will contain one quart.

Bone-Sickness in Cattle.

In the *Country Gentleman* of Feb. 22d, I observed the inquiries of Mr. Tuttle concerning a morbid appetite his cows had acquired for chewing old bones and such like, and at the time of reading, had thoughts of writing a reply, only that I expected some one nearer you would do so before me. In this expectation I have not been disappointed, and my object in writing now is to confirm as far as I may the practical conclusions of Professor Nash, in your paper of Feb. 23d, while at the same time I dissent from the reasoning by which he arrives at them.

In the poorer parts of Scotland, up to twenty or thirty years ago, a disease used to prevail similar in many respects to the *bone*-sickness of America. In cold seasons, bleak situations, and poor pastures, not only cows but work oxen, and sometimes even young cattle, would be attacked by it—would become stiff, dejected and hide-bound—would lose flesh and acquire a morbid appetite just as Mr. Tuttle well describes. Since the introduction of bone-dust and guano—a more liberal system of farming and drainage—and a larger proportion of root crops, all this has mostly disappeared; and so far, for the practical purpose of the farmer, the chemical solution of the professor is correct. Beyond this, however, I cannot endorse his ideas, nor need I remind him that in explaining such a subject, science requires our reasoning to be legitimate, as well as our conclusions applicable.

Where is the proof that in this disease the bones are actually affected? Or if they be, that it is by a deficiency of their earthy constituents? In samples that I have seen a number of years ago in Scotland, where the same ideas about the bones being in fault were sometimes entertained, the deficiency seemed rather to be in the organic part, and the condition was only in keeping with the general wasting of the other organic tissues of the body. Would it not be well, therefore, to ascertain by actual examination, the deficiency of the bones in earthy matter, before founding a hypothesis on the presumption of their being so?

Then about the symptoms. Mr. Tuttle says his cows "have a hankering for *bones*, *boards*, *chips* and *old leather*, and will take an old bone, boot or shoe, and chew it for hours." Here the tendency is not to chew bones alone, nor seemingly so much to chew for the sake of swallowing, as for the pleasure merely of chewing; so that if the disease is to be named from one of its symptoms, *chewing sickness* would be the more appropriate, while if we adopt the Professor's second reason for naming it, *boot* and *shoe sickness* is equally good. And again, about the kind of animals attacked. Though commonly cows, they may not always be so; and the disease may be predisposed to by the food being insufficient in quantity, as well as innutritive in quality.

The disease, to be understood, requires physiological more than chemical explanation. I need not tell Professor Nash about the important influence which modern chemists attach to the saliva in the function of digestion. In the ruminating, more than in any other class of animals, digestion depends upon insalivation of the food. Insalivation on rumination, and this again on the muscular action of the rumen or paunch. Both the morbid appetite and the wasting and other symptoms, are the effects or accompaniments of deranged digestion, arising from impeded action of the rumen. The disease known to cattle doctors of the last generation in Scotland, as the "chills," or "stiffires," (and I believe the so-called bone-sickness of America to be the same,) is chronic rheumatism. In rheumatic disease, the white fibro-muscular tissues are the chief seat of the affection. The paunch or rumen of the cow, consists largely of this structure; and is always impaired in its action, when rheumatism assumes its chronic form in the other muscular tissues. When this condition exists for any length of time, rumination becomes languid or all but ceases, and the animal suffering by deprivation of this, the natural stimulus to the salivary secretion, takes to a supplementary cud, in the shape of leather, sticks, bones, or any other resistant fibrous substance within its reach, tough enough to resist its teeth, and not so hard as to hurt them.

Such being the cause and connexions of the ailment, a word about its prevention and cure. I quite agree with your correspondent about the propriety of liberal and nutritious feeding as a means of prevention. Dry and comfortable housing and good shelter if at pasture, are equally so. In rheumatic disease, poverty of flesh is generally the predisposing, and starvation, wet or cold, the exciting cause. As a means of prevention, both these should be avoided, and as a curative agency where the disease has been established, their opposite must be insisted on. But besides these, which should never be neglected, art can do something more. Where the animals are very weak and stiff, a large warm plaster upon the back and loins is advantageous; and the regulating of the bowels, either by judicious change of food, or by mild aperient medicine and vegetable tonics and stimulants will be found of great service. It is not often that acidity of the stomach will be so great as to require alkaline medicine, such as ashes, to be given, but if such were the case, the carbonate of ammonia, for its stimulating as well as antacid effects, is to be preferred. As to ground or dissolved bones in any form, I have no belief in them, nor in the power of the stomach of the cow either to digest or assimilate them. The better way, as suggested by Professor Nash, is to give them in a vegetable condition.

One hint more and I have done. I would advise owners of cattle when they find them addicted to this chewing mania, to see that nothing of a hurtful or poisonous description be left in their way. In Scotland, in the neighborhood of towns or villages from which large quantities of manure is carried, there are every year numbers of cattle killed by eating refuse of white lead, paint cleanings and the like, yet no one would say that these were matters needful to supply their bones. The symptoms of this kind of poisoning are very peculiar, and I may some day give you them in detail, when some of your correspondents get puzzled by the occurrence of a case and apply to you for information. Meantime I am, &c., M. A. Cuming, V. S. *St. John, N. B., March* 16, 1854.

Raising Water by Rams.

"I have a never-failing spring, which runs, I should think, a stream large enough to fill 1¼ inch hole without altering, wet or dry. I want to raise it 40 feet and bring it 60 rods. Can a tile and cement pipe be made for this purpose? Would this stream work a ram—and of what size and price? The cost of tile and cement—and cost per rod of laying?"

A stream that will fill an inch pipe with a descent of about 2 feet, will drive successfully a small sized water-ram, and elevate a stream to the height and distance desired. Lead pipe is commonly used for the discharging-pipe, and it may be necessary to use it for such a head, and for so great a distance. But its liability to become corroded and to communicate poison to the water in some instances, is an objection to its use. Pipe made by enclosing tile in water-lime-cement would be too large for this purpose, and its size would make it more liable to burst by the heavy pressure, by presenting a large surface. The best mode of forming a cement pipe for this purpose, is to procure the best hydraulic cement and mix it dry with twice its bulk of clear sand, so that small portions may be quickly moistened into mortar and used before it *sets*. It is laid by means of a trough or mould evenly into the bottom of the ditch, a smooth rod placed in it, and another layer placed above the rod, which is withdrawn just at the moment of setting. Another portion is added to the end of this, and the tube thus formed continued at pleasure. A bore of three-fourths of an inch, with compact and hardened cement sides two inches thick at the greatest pressure, would probably be strong enough—but great care should be taken that there are no holes nor crevices; and that it attains flinty hardness before the water is let in.

We do not know the prices of the smaller rams, but our impression is, some fifteen or twenty dollars. They may be had, doubtless, at the principal agricultural warehouses in the larger cities.

We cannot inform our correspondent of any person who makes it his business to construct cement pipes—nor the cost per rod—but it is unquestionably much cheaper than lead pipe.

Oil Cake for Cattle.

MESSRS. EDITORS—At page 42 of *The Cultivator*, I found, among other inquiries, one in relation to the effect of oil cake in the rearing of calves. Having had some experience in its use for two winters past, I thought that, as queries and experiences tend much to the development of that knowledge of which your journal is so able and attracting an advocate, I would forward an item in reference to the question put by your correspondent.

Oil cake is the substance left in cheese form, from the press, after the oil has been expelled by hydraulic power. In this state it still retains much of its oily nature, and here is probably much of its fattening qualities. The cake is ground into meal, and in this form fed to the stock, upon which they thrive greatly, and are kept in a good healthy condition. When made into slop and left to stand a few hours before using, it expands far beyond the original bulk, so that a very small quantity forms a stiff slop by swelling. I keep one cow only, and am raising a calf which will be one year old next May. My plan in feeding has been to mix one third oil meal and two thirds buckwheat bran, and feed in the form of slop to both cow and calf twice per day. I prefer the slop rather than dry meal, as then there is not the waste which occurs when the mouth of the animal, while chewing, is turned away from the feeding tub, by which much of the dry meal falls and is lost. This might be avoided, and the meal fed dry to all other stock than cows giving milk, by using stanchions to keep the mouth over the feeding tub. It has been found to be a first rate feed for cows, as I have been able to keep mine not only in good condition, but to milk her most of the year. I see no necessity of cows going dry and being only an expense for three or four months of each year, when proper and regular feeding may prevent it. Oil meal is coming more into use in this country as its benefits are being understood. It is now much used mixed with other feed for fattening cattle for the market, and commands a ready sale from persons engaged in this business. Within a year or two its price per ton has been rapidly advancing, and at my last information (about one month since,) was readily bringing $27,50 at the mills.

As your correspondent asks where it may be had, I would state that I obtain mine at Bennington, Vermont, where a pure article is manufactured by SAMUEL ROCKWOOD and by CHA'S. S. COLVIN, who I understand cannot supply the demand for oil meal, since farmers and drovers are beginning to know its value as an article of feed for cattle. Bennington may be reached from Troy, 30 miles, by railroad. When the meal is first offered to cattle unaccustomed to its use, they almost invariably refuse it, but a little effort at first with the dry meal soon leads them to relish it so much so as to take it eagerly. My cow and calf are both in fine condition, and I have about 100 lbs. of meal on hand for which I would not take thrice its weight in other feed. I would say that I have fed the oil meal without being mixed, but find it to do well and last much longer with some other feed mixed with it. E. C. *Lebanon, N. Y.*

We thank E. C. for the above. Oil cake is used in England largely for fattening both cattle and sheep. A considerable portion of its supply comes from this cutry, and is preferred to that made in Europe, owing to the fact that the oil is less thoroughly pressed from it here than there. It is also extensively used in some parts of this country and with the best results. It has been steadily rising in price for twenty years or more, and is now worth about $35 per ton in New-York.—EDS.

Houses of Unburnt Brick.

INQUIRY.—In the Country Gentleman of March 23, an unfavorable opinion is expressed on the mode of building houses of gravel or small stones and mortar. Can any of your readers in the neighborhood of Toronto, U. C., inform us what has been the result with the houses built of clay or unburnt bricks, in that neighborhood, several years since? The *British American Cultivator*, of that town, published a number of articles on the subject in 1842 or 3, with details of the manner and cost of construction, and praised them highly for their cheapness, durability and comfort. A number of houses had been built of that material.

These articles were republished in the Report of the U. S. Patent Office for 1843. The mode of building was highly recommended by Hon. W. H. ELLSWORTH, Commissioner of Patents, and he built a house of the same material on Massachusetts Avenue, Washington. Has the plan justified the expectations of its advocates? A SUBSCRIBER.

To Destroy Thistles.

The Canada thistle is easily subdued, if they can be plowed. Plow in the fall and sow to wheat, and stock down heavy with the large red clover and timothy. In the spring, as soon as the ground is dry, or the clover is two inches high, sow plaster, as much as you please, from ½ to 4 bushels per acre. Get your wheat off as early as possible; let the clover grow as late in the fall as is convenient: then let nothing but calves or yearlings on to it, nor let it be fed more than just to keep the mice from nesting in it. The better you can make the clover grow, the more fatal to the thistle. P.

Notes for the Month.

New-York State Fair.

At the regular meeting of the Executive Committee of the New-York State Ag. Society on the 6th of April, a resolution was adopted, that the Annual Exhibition for this year, be held on Hamilton Square, in the city of New-York, on the 3d, 4th, 5th and 6th days of October next.

Postage.—We have frequent inquiries as to the postage on the *Country Gentleman* and *The Cultivator*, from which it appears that some postmasters charge twice as much as they should. The postage on the Country Gentleman is *twenty-six cents a year*, payable quarterly in advance *at the office where the paper is received.* The postage of The Cultivator is *six cents a year*, also payable in advance *at the office where the paper is received.* The postage is the same whether paid at the office where mailed, or where received by the subscriber. We are often requested to pre-pay the postage; but this we cannot do without unnecessary trouble, as no regulations have been made by the Post Office Department by which the postmaster here can transmit to the postmaster where the paper is sent, an account of the prepayment; consequently if the postage is prepaid here, we have to pay it weekly on each paper, whereas the subscriber can pay it once a quarter or once a year if he chooses

Improved Stock.—Those in want of high-bred stock—Durham and Devon cattle, South Down sheep, and Suffolk and Berkshire swine—are referred to the advertisement of L. G. Morris, Esq., in this paper. It will be seen that he has come to the conclusion, owing to the extent of his private sales the past year, not to hold his contemplated public sale the coming summer. We are pleased to learn that the demand for his stock, and the prices it has brought, have been in a high degree satisfactory. Mr. M. has spared no expense requisite to obtain the best to be procured abroad, and such liberality should be handsomely rewarded.

☞ The *Working Farmer* is assured that we published the communication of "F. C. L." just as he wrote it, and that we have the writer's name, and vouchers for his veracity and responsibility. We do not see, therefore, but the editor will be compelled to withdraw the credit he has given us for ingenuity in devising this ingenious mode of injuring him. That superphosphate of lime, when properly manufactured, is a valuable fertilizer for certain crops and soils, there can be no doubt. Were we his "untiring constitutional enemy," as he represents us, there would be no necessity of resorting to subterfuge or invention to enable us to publish articles to his discredit. All we should have to do, would be to copy the articles which have already appeared in various agricultural papers, to show that notwithstanding he professes to make an *improved* superphosphate, it has in many instances proved *perfectly useless.* So far, however, from manifesting any desire to injure him, we have refrained from doing this, and have published no statements, even from our own correspondents, without proper vouchers for their authenticity. We have served him as we have Mr. De Burg and other manufacturers—published the opinions of our correspondents in favor of and against both, without prejudice or partiality to either. Little confidence as we have in "Prof." Mapes' science or statements, we have certainly no desire to injure him; but justice to our readers—justice to science, requires the exposure of pretensions not founded in truth; and unpleasant as the duty may be, we shall not refrain from expressing our opinions as occasion may require, even should they prove unacceptable to the editor of the W. F. There is no secret about the manufacture of superphosphate of lime. Mapes *can*, and undoubtedly has made a good article. Any one else can do the same, and at a far less cost than he charges for it. The price of superphosphate of lime in Great Britain is about £6 (less than $30) per ton, and any one who chooses to make it, will find directions, by turning to the 168th page of this volume of the Co. Gent., for making a first-rate article. It is, however, a difficult matter, in most parts of the country, to procure the materials, and it would probably be as well for those who wish to test its merits, to purchase their supply, provided they procure it of a manufacturer upon whose integrity and carefulness they can safely rely.

Short Horns.—John R. Page, Esq., of Sennett, Cayuga county, purchased three very fine heifers, last week, for gentlemen in Cayuga, from the herd of Dr. Herman Wendell of this county. Dr. Wendell also sold a valuable young Durham Bull, to Ezra B. Meech, Jr. of Vermont, to whom he was sent a few days since. We learn with pleasure that the heifers, and the young bull, Lord Ducie, imported last autumn by Dr. Wendell, from the herd of Mr. Bell of Mosbro Hall, are doing finely. We also understand that Dr. W. wishes to dispose of the valuable prize bull Meteor (11811) who is now in fine condition.

Remedy for the Potato Rot.—Our readers may remember that we published in our last vol. a statement from Mr. Barrett of Cayuga, that he and his neighbors had prevented all rot in their potatoes for several years, by simply sowing ashes over them at the rate of from two to three bushels per acre, once a week for about six weeks, commencing immediately after the second hoeing. Rev. Lyman Smith, of Charlotte, Vt., confirms this statement in a letter to the N. E. Farmer. He says he has prevented the rotting of potatoes by sprinkling the tops with ashes, as soon as they made their appearance, a table spoonful to each hill; after hoeing applying the same amount again. The ashes were applied immediately after a shower, or upon a heavy dew. After such applications he has no rotten potatoes. The experiment is certainly worth trying, and we hope some of our readers will make the application and let us know the result.

☞ We copy the following from the March no. of the *Working Farmer*:—

"Chess in Wheat.—We shall exhibit a head of wheat at that Society, [the U. S. Ag. Society] with the wheat and chess mixed, and on the same centre, and leave it to a committee of the Society to investigate."

The telegraph announced the exhibition, as stated above, but we have looked in vain for any account of the results of the "investigation." Will Prof. Mapes please enlighten us on the subject?

Ohio State Fair.—With a promptitude worthy of note and imitation, the list of premiums, awarding committees and regulations of the Fair of the Ohio State Board of Agriculture, to be held at Newark in September next, is already published. The show ground is to be a portion of the "Ancient Works," still remaining near Newark, which possess great interest both on account of their antiquity, and the mystery which veils the purpose for which they were originally constructed.

Prof. E. S. Carr, of the University of Albany, has been appointed Chemist to the State Ag. Society, in place of Dr. Salisbury, who has resigned, and removed to New-York.

Vegetable Weeder.—We have been shown a model of a hand cultivator, contrived by Mr. C. W. Emerson, of Bethlehem, which he calls a "vegetable weeder," that promises to be highly serviceable in the cultivation of all garden crops.

Answers to Inquiries.

Improved Breeds of Stock.—Will you please inform me at what prices I can procure Short-Horn and Devon Cattle—also South Down Sheep and Suffolk pigs, in your state. I see numerous advertisements of improved stock in your paper, but no prices are mentioned. J. A. *Geneseo, Ill.*

Prices of the above breeds of animals vary according to quality—they may be had from $75 to $500 or $1000 for Short Horn and Devon Cattle—$10 to $50 for South Down Sheep, and $5 to $20 for pigs.

In answer to an inquiry on this subject, L. G. Morris Esq. of Fordham, informs us that he has sold at private sale during the past year, eleven head of Short Horns under two years old, and several quite young, at an average price of $237,63, and five Devon bull calves at an average of $140. His price for South Down rams and ram lambs, is from $25 to $75—price for Suffolk, Essex, and Berkshire pigs at eight weeks old, $30 per pair, and $40 to 50 each, over that age. His private sales of stock the past year have amounted to about $7000.

Hereford Cattle.—A correspondent in Maryland, inquires—"What is the opinion of Hereford cattle at the North? Owing to the comparatively small number imported, they have not been very extensively tried. So far as we know, they have given entire satisfaction to those who possess them. Our correspondent, and our readers generally we presume, would be glad to hear the opinions of those who have bred them. Mr. Corning of this city, has a small herd of this breed, of very superior quality, which are universally admired.

Carrots.—I observe there are three kinds of carrots. Which is the best for winter milch cows? Also the best time to plant them? Yours, &c., S.

The long-orange carrot is generally preferred, probably as much for its rich yellow appearance, as for any real superiority in nutriment. The white carrot, which grows partly out of the ground like the mangel wurtzel, bears larger crops and is more easily harvested. We have ascertained its milk and butter-producing qualities to be of a high character. But from some unexplained cause, the seed which we have received has proved so poor, perhaps either from long-keeping or bad maturity, that we have lately planted the orange exclusively.

Sow *early*—many seeds fail by leaving the operation till the earth is too dry. Let the soil be deep and rich, and previously cleared of weed-seeds, and the crop will be cheap and heavy.

Straw Cutters.—Can you give me an idea of the best description of straw cutter now in use? I have one that was made at Albany, N. Y., which cost $18, which I should be glad to get one dollar for. W. H. Verpell. *Burford, C. W.*

A perfect straw cutter, at a reasonable price, remains yet to be invented. The "green hide" cutters, made by Ruggles & Co. and others, are nearly faultless in every particular but one—they do not cut short enough. For moderate price and durability, we have no objections to make to them. Those forms of construction having a sliding frame and knife, driven by a fly wheel, usually work well for a time—but a slight bend in the blade or wearing in the frame, makes them cut badly. Heavy and stiff knives, attached directly to the fly wheel, with the length of the cut regulated by feeding rollers and cog-work, have generally accomplished the purpose well, but such a machine well-made cannot be had for much less than thirty dollars. The field is yet open for inventors.

Potatoes, &c.—*W. B.* We presume the Dover potato to which you allude, can be procured of Mr. J. C. Tiffany, Coxsackie, N. Y. We have never seen them, and know nothing of their qualities. The best early potato cultivated in this vicinity, is what is called the *Mountain June.* They are of fair quality, productive, and as little liable to rot as any potato we have cultivated. Good garden seeds, can be procured at all seed stores.

Swine fed on Beach-nuts.—A correspondent, who has wintered his breeding sows on beach-nuts, wishes to know if any bad results are likely to take place in consequence of this practice, to those who are expected soon to have pigs. He has been informed that the pigs will die, or have no hair on them. As we have had no experience in this mode of feeding, perhaps some of our correspondents will inform us whether it is necessary to resume the feeding of grain, roots,&c. in order to avoid so strange a disaster—our belief is, however, that our inquirer has nothing to fear—the only bad result being from the exposure and scant food which animals so treated too often receive.

Messrs. Editors—Will you have the goodness to answer me through the medium of your valuable paper, the following questions:

I am a wool grower, and have in my flock of sheep the following kinds—the Silesian, French, Guadaloupe, and Spanish Merinoes. Now what I wish to know is, which of the above kinds is the most profitable to grow wool from, according to the weight of carcass and expense of keeping, and which will produce the most pounds of wool? By answering the above question you will confer a very great favor upon a constant reader of the Cultivator. L. B. Spencer. *Windsor, Vt., March* 10, 1854.

We have no data from which we can solve the question of our correspondent. If any of our readers can do it, we shall be glad to hear from them.—Eds.

Reapers and Mowers.—Can you tell me whose reaping machine is best, and whether there is a machine with a mower and reaper combined that is as good as the reaper without the mower? B. M. Branner. *Mossy Creek, Tenn., March* 4.

Experience is yet limited, so far as a comparative test of the different reapers is concerned. Hussey's, McCormick's, Burrall's, Atkin's Self-raker, and some others, appear to be very nearly equal in merit, in ordinary cutting, so far as we can judge by superficial observation. We have never seen a reaper used for mowing that did not sometimes fail badly. Ketchum's Mower, we have never known to fail in doing good service, and we have often regretted his machine had not been sent to England for experiment.

Suffolk Pigs.

THE subscribers are now prepared to receive orders for pure Suffolk Pigs, bred from Stock Imported in 1848 by the late William Stickney, and by the subscribers in January, also an Importation of 12 in October 1853.

Address, JOSIAH STICKNEY, Watertown, or
ISAAC STICKNEY, Boston, Mass.
Boston, April, 1854—ap13—w1am3t—m1t

Brahma Pootra Eggs.

THE subscriber offers for sale Eggs of the above variety, bred from a few selected fowls and warranted pure

Price $5 per dozen, packed and forwarded by Express to any part of the Union. WILLIAM B. SMYTH,
April 13—w3tm1t New Britain, Connecticut.

Brahma Pootra and White Shanghai Eggs.

THE subscriber will furnish Eggs from fowls of the above named varieties at the following rates, viz:
Brahma Pootra, (grey Shanghai,)....$3 per dozen.
White Shanghai,........................ 2 "

N. B. The fowls in my possession are from the best stock to be had in the country. The White Shanghais are of Dr. E. Wight's importation, and the Brahmas from that of Mr. Hatch. Address, post paid,

JOSEPH G. HILDRETH,
March 30—w2tm1t* No. 9 Franklin st., Boston, Mass.

Pure Bred Stock at Private Sale,

At Mount Fordham, Westchester county, New-York, Eleven Miles from City Hall, N. Y., by Harlem Railroad Cars.

HAVING met with more success than I anticipated the past year, with the Catalogue of male animals at Private sale, is the reason for offering this lot of animals, AND MY JUNE SALE BY AUCTION, WILL NOT TAKE PLACE. A full descriptive Catalogue with prices attached, will be published on the fifteenth of April, and I intend to be at home myself to see any who may call. I will sell at private sale, about 18 Short-Horns, 6 of which are young Bulls and Bull Calves. The Cows and Heifers old enough will be in Calf to the Celebrated Imported Bull "BALCO," (9918.) or Imported "ROMEO," winner of the first Prize at Saratoga, in 1853; and also at American Institute the same year.

The young Bulls and Bull Calves, are some of them from imported Cows, and sired in England; the others are sired by the Imported Marquis of Carrabas, (11789.) winner of the first Prize at Saratoga, the past year, as a two year old.

Also, about 10 head of Devons, consisting of a yearling Bull, sired by MAJOR, and 5 Bull Calves, sired by my imported first Prize Bull, FRANK QUARTLY, and several of them from imported Cows. The Cows and Heifers old enough, will be in Calf to FRANK QUARTLY. Also 6 or 8 Suffolk Sows; and several young Suffolk and Essex Boars. Also, 2 Southdown Rams, Imported direct from Jonas Webb; and 6 Yearling Rams, all bred by me, from Stock on both sides, imported from Jonas Webb. Catalogues will be forwarded by Mail if desired.

All Animals delivered on SHIP-BOARD, or RAIL CAR in the City of New-York, free of expense to the purchaser The Devons are at my Herdsdale Farm, 12 miles north, to which place I will take persons both to and from.

MY FRIEND MR. N. J. BECAR, who is interested in several of my Importations, will also sell about 10 head of Short-Horns, consisting of 4 young Bulls, and 5 or 6 Females. His young Bulls are also several of them from imported Cows, and sired by the LORD OF ERYHOLMNE, (12205,) and the celebrated first Prize Imported Bull ROMEO. Mr. Becar's Cows and Heifers are in Calf to the imported Bull, MARQUIS OF CARRABAS, (11789.) Mr. Becar can be seen at his Store, No. 187 Broadway, New-York, at which place he will make arrangements to go to his Farm, at Smithtown, Long Island. His Animals will be entered in the same Catalogue with mine, which can be obtained by addressing him at his Store, or me at Mount Fordham. His animals will be delivered in the same manner as mine. Our Importations have been in almost all cases made at the same time, and are of equal merit, excepting that I have more in number. ☞ Terms, cash on delivery. L. G. MORRIS.

March 30, 1854—w&m2m

Imported Horse Consternation.

THIS well known, thorough bred horse will stand the present season, as heretofore, at the farm of the subscriber, one mile west of Syracuse. For full pedigree, see Derby and Miller's edition of Youatt. *Terms*, $10 the season; $15 to insure, payable in advance in all cases. Good pasturage furnished at 50 cents per week. Mares at risk of owners in all respects. No mare will be served that is either ringboned, spavined or blind. J. B. BURNET.

Syracuse, May 1, 1854—w2m—m3t

Black Hawk Horse Raven.

THIS horse, one of the most distinguished of the Black Hawk family, will stand at the stables of the subscriber the coming season. Terms, twelve dollars the season—Insurance by agreement. Good pasturage afforded at a reasonable price. Accidents at the risk of the owners, though great care will be used to prevent their occurrence.

The subscriber pays much attention to the breeding of fine animals. He is the owner of the beautiful horse Falcon, the thorough bred mare Latona (purchased of the late Mr. Gibbons,) and others. The celebrated horses Vermonter, at Burlington, Iowa, and Champlain at Hartford, Trumbull county, Ohio, were bred by him. He has for sale a very valuable Black Hawk mare, four years old in June next.

ROBBINS BATTELL.

Norfolk, Conn., March 30. 1854. ap6w1tm2t

The Original Black Hawk

WILL be kept the coming season at his old stand, the stable of DAVID HILL, in Bridport, Vermont. His services will be limited to fifty mares Terms $50 the season.

Those wishing his services should send their names early, as those sending first will be first served.

DAVID HILL, Agent.

Bridport, Vt., April 1—m2t*

Langstroth's Movable Comb Bee Hive.

PATENTED Oct. 5th, 1852.—Each Comb in the Hive is attached to a separate movable frame, and in less than five minutes they may be all taken out, without cutting or injuring them, or at all enraging the bees. Weak stocks may be quickly strengthened by helping them to honey and maturing brood from stronger ones.

Queenless colonies may be rescued from certain ruin by supplying them with the means of obtaining another queen; and the ravages of the moth effectually prevented, as at any time the hive may be readily examined, and all worms, &c., removed from the combs. New colonies may be formed in less time than is usually required to hive a natural swarm, or the hive may be used as a non-swarmer, or managed on the common swarming plan.

The surplus honey may be taken from the interior of the hive on the frames or in upper boxes or glasses in the most convenient, beautiful and saleable forms. Colonies may be safely transferred from any other hive to this, at any season of the year, from April to October, as the brood, combs, honey and all the contents of the hive are transferred with them, and securely fastened in the frames.

We are now prepared to sell state, town, county and individual rights, to make, vend and use these hives on reasonable terms. The price for individual rights, which will entitle the purchaser to make the hive for his own use, is five dollars. We can also furnish hives to all who wish. Price from two to five dollars. Upon the receipt of nine dollars we will send the right, together with a beautiful hive, with glass on four sides, showing all the combs. For ten dollars the right and a well made hive which will accommodate two swarms with glass on the back side only. For seven dollars the right and a well made hive without glass, which any one can make who can use the simplest tools.

Agents wanted for the sale of the above rights. To those who can furnish good testimonials of character, qualifications and responsibility, a liberal commission will be paid.

All communications addressed to J. BEALS, *Greenfield, Mass.*, will meet with prompt attention.

For one dollar, postage paid, Langstroth's book entitled the Hive and Honey Bee, will be sent free by mail.

J. BEALS,

April 13—w4tm2t Att'y for Rev. L. L. Langstroth.

The Cleveland Bay Stallion, Young Emigrant,

WILL stand for mares the ensuing season, at the stable of the subscriber, in the west part of the town of Glenville, near Hoffman's Ferry, Schenectady county, N. Y.

Young Emigrant is seven years old this spring, 16½ hands high, is a beautiful mahogany bay with black legs, mane and tail, and his symmetry of form, justness of proportion and strength of bone and muscle render him an important consideration to those who wish to make real improvement in that noble animal, the horse. He was got by Emigrant. This celebrated stallion is of the Cleveland Bay breed, and was brought to this country by the late John Walkington. Emigrant was got by Defence, the property of Mr. Parker, of Wobut Mills, near Poclington, Yorkshire. Defence was got by Fortunate, the property of Henry Harrison, of South Cliff, near Market Weighton, Yorkshire. Defence's Dam was by Farmers Interest, the property of Mr. Hotman, of Newton, Yorkshire; his grand dam was by old Blacklock, the property of Mr. Kirby, of the city of New-York. Emigrant's dam was got by Candidate, the property of J. Hance, of Spaldington, near Howden, Yorkshire. Candidate's dam was by old Grogg, who was allowed to be one of the best bred stallions that ever trod Yorkshire. Young Emigrant was purchased of A. M. Starkweather, of Orleans county, N. Y., when three years old. His dam is a bay with black legs, main and tail, and his grand dam the same color; his grand sire was called Whalebone—was also a bay and very large.

Terms, $6 the season and $8 to insure a foal. All moneys to be paid on the first of March next. All accidents and escapes at the risk of owners of mares.

ISAAC D. VAN EPS,

May 1, 1854—m1t* Glenville, Schenectady Co., N. Y.

For Sale in Scioto Valley, Ohio.

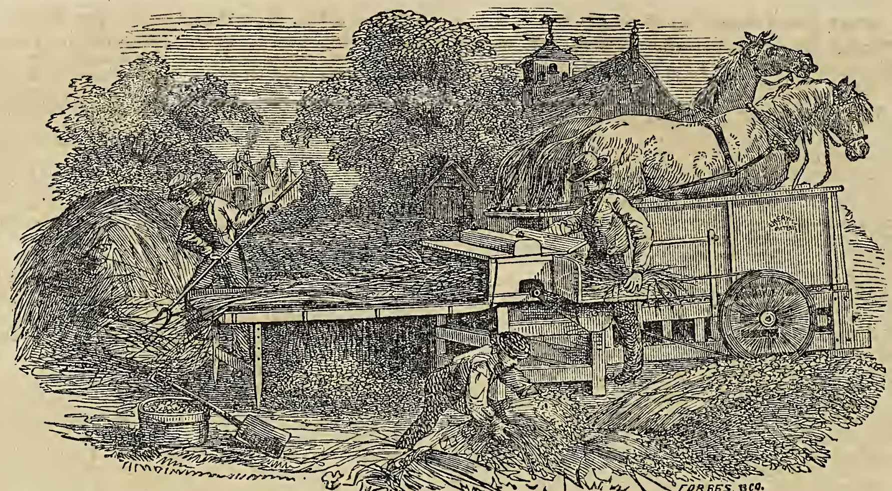
3.500 ACRES OF LAND, with Steam Saw-mill, for sale in Scioto Valley, Ohio, and lying on the Ohio canal.

This is an opportunity seldom to be met with, and will be sold at a bargain.

A term of years will be given for most of the purchase money.

Persons desirous of purchasing, by calling on or addressing the subscriber at Chillicothe, Ohio, will be promptly attended to, and full description of premises given.

March 30—w4tm1t* H. H. HOAG.



RICH'D H. PEASE, Successor to Emery & Co.,

SOLE PROPRIETOR OF THE

ALBANY AGRICULTURAL WORKS, WARE-HOUSE AND SEED STORE.

Manufactory, on Hamilton, Liberty, and Union Streets—Warehouse and Seed Store, Nos. 369 *and* 371 *Broadway, Albany.*

Emery's Patent Railroad Horse Power.

THIS Horse Power has, for several successive years, been subjected to many severe tests, both scientific and practical, in public and private, under every variety of circumstances and against the strongest competition throughout the United States, including California and Oregon. It has also met with great favor in Great Britain, as well as many of the continental countries of Europe, Asia and Africa; its superiority has been established in every instance beyond a contingency.

Among the peculiar properties of this Power, not possessed by any other in use, and which give to it its chief merit and popularity, are the following: The Gears are outside the Power, (not under the horses,) easily accessible and readily cared for. There being but two gears and one interval or converge gear and all with their teeth made very accurately upon the most approved form, insures strength as well as smooth and equal action, and avoids unnatural wear and friction.

These gears, as well as the pully, may be instantly transposed, by means of their couplings and fastenings, from side to side, or to produce different degrees of force and motion, thereby allowing a slower pace for the horses, without, in any degree, lessening the effect. This last feature, together with a longer platform for the horses, is of great importance, and are among its most prominent features.

Very little increased friction or retardation is produced by any amount of wear, as is the case with most other Powers.

All the gears, pulleys, &c., are so constructed that the greatest stress, in all cases, is applied to those of the greatest diameters, their strength being proportioned to the squares of their respective velocities; while with most others the opposite state of facts exist, and necessarily the weakest parts are those most exposed to wear and difficult of access and care. Again, the sections of the endless platform being longer make a stronger and more durable plank floor for the horses. The platform returns over large circuits at each end, and is easily kept adjusted as to tightness, by means of tightening bolts at the forward end.

Prices for 1854.

"Emery's Patent Changeable Horse Power," Thresher, Separator, for two horses,	$160
Do. for one horse,	128
Do. Two-horse Power, with Thresher and Cleaner combined,	235
Common Rack and Pinion Power Thresher, &c., 2 horses,	150
Do. one horse,	120
Emery's Patent Two-horse Power including band wheel,	116
Do. one-horse do,	85
Common Rack and Pinion, two-horse,	105
Do. one-horse,	75
Threshing Machine, with Separator and fixtures, 26 inch cylinder,	40
Do. 24 inch cylinder,	37
Sett of Bands for Machine, with extras, &c.,	5
Fanning Mills, fitted for Power,	$26, 28, 30, 32
Portable Circular Saw Mills, with 24 inch circular saw for wood cutting, &c.,	37
Extra table and saw for slitting boards and fencing stuff, and general shop use,	7
Upright or Felloe Saw, for wheelrights' use.	40
Cross-cut Saw, arrangements greatly improved to attach to Power for cutting logs,	25
Churn attachment to Power, for one or more churns,	12
Feed Mills, with iron plates,	40
French Burr Stone Mills, for farm or mill use,	$120 to 300
Power Corn Sheller,	40 to 55
Clover Huller,	30 to 100
Improved Dog Powers,	12 to 15

TERMS—Cash or approved notes or acceptances, with interest, payable within four months, in Albany, New York, Boston, Philadelphia or Baltimore, as may best suit the purchaser.

As proof of the conceded excellence of this Power in its construction and actual performance, the public are referred to the numerous awards and decisions of juries, judges and committees, at all the principal Fairs and Exhibitions in this country, comprising those of nearly half the States in the Union, among which are the following, where it received the 1st premium:

New-York State Ag. Society,	1853, 1852, 1851, 1850
Ohio State Board of Agriculture,	1853, 1852, 1851, 1850
Michigan State Agricultural Society,	1853, 1852, 1851
Indiana, Illinois, Pennsylvania, Maryland and Missouri State Agricultural Society,	1853
American Institute,	1852, 1851
Canada Provincial Society,	1852, 1851
Exhibition of Industry of all Nations, in New-York,	1853

Many more flattering testimonials might be produced, but as all are sold with a liberal warrantee, it is unnecessary.

The subscriber has purchased the entire stock and fixtures of the Warehouse 369 and 371 Broadway, and Manufactory of the late firm of EMERY & Co., of this city, and intends to carry on the business of manufacturing and selling Agricultural Implements. He will be assisted by Henry D. and Wm B. Emery; the former in the general business, and the latter in superintending the manufactory.

The subscriber will also furnish to order and keep constantly on hand, a good assortment of the most approved machinery for the farm and plantation, including Reaping and Mowing Machines, Grist Mills, Power Corn Shellers, Corn Hullers, &c., together with a complete stock of Implements designed for the Garden, Farm and Plantation, in all the various departments, with a full and complete assortment of Field and Garden Seeds—as Clover, Timothy, Blue Grass, Orchard Grass, &c. For further particulars, address the subscriber who hopes by due attention to business and a desire to please those who feel disposed to favor him with their orders, to merit a share of the patronage of the agricultural community. RICHARD H. PEASE.

Albany, April 15, 1854.

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits, and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

Buchanan on Grape Culture,

AND

LONGWORTH ON THE STRAWBERRY.

THIS DAY PUBLISHED, THE FIFTH EDITION, REVISED.

One volume 12mo, Cloth, 63c.

THIS VOLUME SHOULD BE IN THE HANDS OF every cultivator of these delicious fruits, for it embodies, in a compact and available form, the experience of accomplished and practical Horticulturists on subjects which have come directly under their own observation for a long series of years.

Of a former edition of "Buchanan on the Grape," we subjoin a few

Notices of the Press.

Mr. Downing in his Horticulturist says: "It deals more with facts, with actual experience, and observation, and less with speculation, supposition and belief, than anything on this topic that has yet appeared in the United States. In other words, a man may take it, and plant a vineyard, and raise grapes with success."

"Furnishes, in a small space, a very great amount of instructive information relative to the culture of the Grape."—*Farmer's and Planter's Encyclypœdia.*

"Will be found to convey the most opportune and valuable instruction, to all interested in the subject.—*Neill's Fruit and Flower Garden.*

Those who desire the book sent by Mail, will receive it pre-paid, by remitting the price, by letter post-paid, to the Publishers. MOORE, ANDERSON & Co., Cincinnati.

For sale by A. S. BARNES & Co., IVISON & PHINNEY, and C. M. SAXTON, New-York Mar. 30—w2tm1t

Field and Garden Seeds.

SPRING WHEAT, Barley, Oats, Grass Seeds, Clover, Fresh Ray Grass, Lucern and White Clover just imported.

Excelsior Potatoes, a new and improved variety, Belgian Carrot, Sugar Beet, &c.

Garden Seeds of all kinds, including Flower Seeds.

R. L. ALLEN,
Feb. 16—m3tweowtf 189 & 191 Water-st., New-York.

Early Excelsior Potato.

THIS is a new and very superior sort. They are as early as the June potato, grow above the average size, are mealy and palatable, and have kept better than any other variety planted in this vicinity. The rot has never been known among them. R. L. ALLEN,
189 and 191 Water-st., New-York.
March 9—w3teow—m2t

Garden Implements.

HEDGE, LONG HANDLE AND SLIDING PRUNING Shears; Budding and Edging Knives; Pruning Hatchets, saws and knives; pruning, vine and flower scissors; bill and Milton hooks; lawn and garden rakes; garden scufflers, hoes of great variety, shovels and spades; hand engines, which throw water forty feet or more, syringes and water pots; grafting chisels, tree scrapers, and caterpillar brushes; transplanting trowels, reels; hand plow and cultivator, very useful to work between rows of vegetables, together with a large assortment of other implements too numerous to mention. R L. ALLEN,
Feb. 16—m3tweowtf 187 & 191 Water-st., New-York.

Live Stock Agency.

IN compliance with repeated solicitation, the subscriber offers his services for the purchase of Horses, Cattle, Sheep, Swine and Poultry. His long acquaintance with different breeds and *breeders* of these animals, gives him superior facilities for procuring the best.

SANFORD HOWARD,
Office of the Boston Cultivator, Boston, Mass.
March 9—w6tm3t

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Devons!

I HAVE two Devon Bulls for sale, one two and the other three past, descended from the Hurlburt stock of Connecticut, of good size and build. R. S. WATSON.
Port Kent, Essex co., N. Y.—March 2—w3tm2t

New and Improved Plows,

INCLUDING the Deep Tiller, Flat Furrow, Self Sharpener, Centre Draft, Side Hill, Subsoil, Double Mold, Potato, and Cultivator Plow.

Harrows, Rollers, Seed Sowers, Cultivators and a large assortment of all other Agricultural Implements.

R. L. ALLEN,
Feb. 23—m3tweowtf 189 & 191 Water-St. New-York.

Plows! Plows!

PROUTY & MEARS' Centre Draught Plows of all the various sizes. *Rich's* Iron Beam do do.
Michigan Sod and Subsoil Plow.
Prof. Mapes' Improved Subsoil Plow.
For sale at LONGETT & GRIFFING'S,
March 16—m2t 25 Cliff-street, New-York.

North River Agricultural Warehouse and Seed Store,

No. 53 Cortland-Street, New-York,

WHERE may be found a large and complete assortment of the best and latest improved Agricultural and Horticultural Implements, Field and Garden Seeds, Fruit and Ornamental Trees, Fertilizers of all kinds, &c., &c.

March 1—mtf GEO. H. BARR & Co.

Basket Willow.

CUTTINGS of the best European OSIER WILLOW will be furnished by the subscriber at $3 per thousand. They can be forwarded during the winter to any part of the Union. Orders will meet with prompt attention.

Address C. P. WILLIAMS,
Jan. 1—mtf Albany, N. Y

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.

March 1—mtf GEO. H. BARR & Co.

McCormick's Reaping & Mowing Machine.

I AM now manufacturing 1,500 Reaping and Mowing Machines for 1854, and farmers who want machines are requested to send in their orders early. Last year I had not a supply, although I had 1,500 in the market.

I offer my large experience (both in this country and in Europe) for the last fifteen years or more, in this business, as the safest guarantee the farmer can have in the purchase of a machine of this kind, notwithstanding the pretensions of others, whose limited experience in this business accounts for their *large promises.*

Deeming it useless to insert long advertisements in the newspapers, I shall be pleased to furnish applicants with my printed circular.

Some important improvements have been made, while the machine will be found as simple and efficient as a machine of the kind can be. The important points that will present themselves in these machines will be, perfect simplicity, ease of repairing, durability, and adaptation to the wants of the farmer as a reaper and mower. I shall continue the use of the wrought iron beam, which will be found very important in mowing, because of the friction upon the ground, and liability to wear and tear a wooden beam or any sheet iron lining that may be used upon it. Another very important advantage which I claim for my combined machine is, that it can be readily changed so as to cut any desired height of stubble, as a reaper or mower, by simply removing three bolts. This principle will be found wanting in other machines, though valuable upon rough ground, or for mowing barley, or lodged oats, timothy seed, clover seed, &c., or where the ground may not be firm, and there be liability in the wheels to sink, and the cutter to be brought in contact with the ground, sand, gravel, &c. With my combined machine, the farmer has also the advantage of a Reel in mowing, which admits of a slow walk to the horses, and is especially valuable when the wind interferes with the successful operation of the machine.

The public are now especially cautioned to beware of *Seymour & Morgan's* "NEW-YORK REAPER," also made by Warder & Brocaw, of Ohio. These men have been selling my machines, and taking premiums with them, (at the Ohio trial in 1853 and elsewhere,) *though under an injunction, the second time, since the late re-issue of my patent in April last,* and in addition to a verdict of $20,000 for past infringements.

☞ Sundry other parties will soon be held to strict account for their infringements, under this patent, which makes them just as liable to be enjoined as Seymour & Morgan.

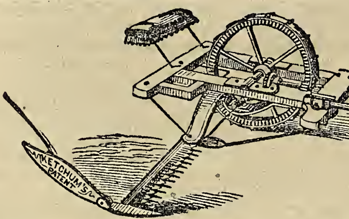
C. H. McCORMICK,
April 1—m2t By WM. S. McCORMICK.

Hallenbeck's Mowing Machine.

THE subscriber having perfected and tested his new and improved Mowing Machine, now offers it to the public for the coming season, confident that it will not fail to give perfect satisfaction. It is simple in construction, light of draft, and perfectly free from clogging. They are built at present for me by Deering & Dederick, corner of Bleecker and Franklin streets, Albany, N. Y. A large number will be made, and are offered to the public, warranted to operate well and to give satisfaction. Persons intending to buy mowing machines will find it to their advantage to examine mine before purchasing.

For further particulars, address the subscriber at Albany, N. Y. MARTIN HALLENBECK.

Feb. 2—w&mtf



Ketchum's Improved Mowing Machine,

WITH ENTIRE CHANGE OF GEAR,

The only Successful Mower now known.

KETCHUM'S IMPROVED MACHINE, which we are building for the harvest of '54, was thoroughly tested last season, and the advantages gained by our change of Gear are in all respects as we designed, viz: *durability, convenience and ease of action.* The shafts now have bearings at both ends, which overcomes all cramping and cutting away of boxing. A counter balance is attached to the crank shaft, which gives it a steady and uniform motion. Each Machine can be thrown out of gear; there is great convenience in getting at each and every nut, all of them being *on upper side of the frame;* oil cups are attached to all the bearings, which, by the use of a wad of cotton. will hold oil for a long time. as well as protect the bearings from dust, grit, &c.; the finger bar is lined with iron its full width, which protects it from wear.

These and various other additions for strength, durability, &c., makes it the most simple and perfect agricultural implement in use. They weigh about 750 lbs. each, and can easily be carried in a one-horse wagon.

It requires not over ten minutes to get one ready for operation, there being but two bolts, (besides the pole bolts,) to be secured, to have one ready for use. They will cut all kinds of grass, and operate well on uneven or rolling lands, or where there are dead furrows. This Machine took the highest award, with *special approbation*, at the World's Fair; it also received, during last season, one silver and four gold medals, and various other flattering and substantial testimonials of approval. We have spared neither pains nor money to make this Machine deserving of public favor, and hope to be able the coming season to supply the great and increasing demand.

We take this occasion to caution farmers against buying *untried* Mowers, if they do (as was the case with many last year) they incur loss, vexation and disappointment.

If any parts are wanted to repair any Machine we have sold, or may hereafter sell, they will be furnished and only manufacturer's cost for the same be charged.

☞ In all cases where extras are wanted, be sure to give us the *number of your Machine.*

Warranty:—That said Machines are capable of cutting and spreading, with one span of horses and driver, from ten to fifteen acres per day of *any kind of grass*, and do it as well as is done with a scythe by the best of mowers.

The price of the Mower, with two sets of knives and extras, is $110 cash, in Buffalo, delivered on board of boat or cars free of charge.

Office and Shop, corner of Chicago-street and Hamburgh canal, near the Eastern R. R. Depot, Buffalo, N. Y.

HOWARD & CO., Manufacturers and Proprietors.

The Mower is also manufactured by RUGGLES, NOURSE, MASON & Co., at Worcester, Mass., for the New England States.

By SEYMOUR, MORGAN & Co., Brockport, N. Y., for Illinois, Iowa and Michigan.

By WARDER & BROKAW, Springfield, O., for Ohio and Kentucky. March 16—w2m, m3t

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United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequaled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine—also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shippping or using on plantation, arm or garden. JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilisers. Jan 1, 1853—m&wtf

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Hot Houses and Green Houses.

NEW EDITION OF R. B. LEUCHAR'S celebrated Treatise on the Construction, Heating and Ventilation of *Hot Houses, Green Houses, Graperies*, and other *Horticultural Structures*, with practical directions for their management in regard to *Light, Heat and Air*, with numerous *engravings*.

Published by JOHN P. JEWETT & CO., Boston.

For sale by the trade generally and at seed stores.

March 2—w6t

Valuable Farm for Sale.

THE FARM KNOWN AS HILLSIDE, in the Town of Macedon, county of Wayne, N. Y., situated two miles from Macedon village (through which the Syracuse and Rochester Railway passes;) and on the Plank road leading to Victor, is offered for sale.

It consists of *ninety-one* acres, eighteen of which are in woodland, forty of intervale of the finest quality, and the remainder of superior upland.

The supply of water is unusually good.

The Orchard is mostly of young trees, and the selection is the result of extensive acquaintance with fruits for many years.

The Apple Orchard of some Two Hundred trees comprises most of the sterling old varieties, and such new ones as were thought worthy of their company.

The Peach Orchard has some Three Hundred trees mostly in bearing, with the fullest succession of fruit possible

The Apricot Orchard of One Hundred trees, has eighty trees of the "Golden," and the remainder of well known kinds.

The Pear Orchard has upward of One Hundred standards, forty of which are in bearing, and about Two Hundred Dwarfs, mainly of the celebrated Duchess Angouleme.

The Cherry Orchard is not surpassed by any in the State, having about sixty trees, and upwards of thirty varieties.

There is a Quince Orchard of about seventy trees, and a choice selection of Plums, Nectarines, Thin Shelled Almonds, &c., &c. There are two acres of Strawberries, one-fourth of an acre of Rhubarb, Gooseberries, Grapes, Currants, Raspberries, Asparagus, &c., &c.

The buildings consist of a new and very superior dwelling, built with every regard to permanence, warmth, ventilation and convenience. Parlor and dining room, each fourteen by eighteen feet, a library and five large bed rooms, with three smaller ones—a bath room, kitchen, wash-house, dairy, pantries, &c., with a deep Verandah on each front. Nine rooms are thoroughly warmed by a furnace in the basement.

The large Lawn is planted with a variety of rare and desirable ornamental trees and shrubs.

The Farm and Horse barns are nearly new, and two laborer's cottages are conveniently situated on the property.

Whether reference be had to beauty of situation, fertility of soil, proximity to market, or to an accumulation of those comforts which time and labor alone produce, this will be found a rare opportunity for profitable investment.

The terms of sale can be known by applying to J. D. HUSBANDS, Rochester; ASA B. SMITH, Macedon, or to the subscriber. WILLIAM R. SMITH.

Wilmington, Del., 2d Month, 1854. Feb. 23—w2tm2t

Fertilizers.

PERUVIAN GUANO, Super-phosphate of Lime of the following brands, Deburgh, Paterson, and Wood,
Bone Dust—sawings or meal, turnings and ground,
Potash Scrapings, Pulverized Charcoal,
Ground Land Plaster, Sulphuric Acid, Poudrette,
For sale at the State Agricultural Warehouse of
LONGETT & GRIFFIN,
Jan. 17—w2m—m4t 25 Cliff street, New-York.

Fertilizers.

SUPERPHOSPHATE OF LIME, NO. 1, of the best manufacture; Peruvian Guano, fresh, No. 1; Poudrette; Plaster of Paris, &c. R. L. ALLEN,
Feb. 23—m3tweowtf 189 & 191 Water-st, New-York.

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price. GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by
GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application. It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

Superphosphate.

NO expense has been spared in the combination of this most fertilizing manure, which contains the natural properties of plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. It is put up in bags, at $40 per ton, of 2,000 lbs., cash.

Office of the New-York Superphosphate Manufacturing Company, No. 159 West-street, New-York.
March 1—m3t VICTOR R. KNOWLES, Agent.

Kentish's Prepared or Artificial Guano.

Twenty Dollars per Ton.

POTATO ROT.—I have used "Kentish's Prepared Guano" this season on potatoes. My crop was large and all sound. Where I did not use it, the potatoes were all rotten and worthless. My neighbors also, who have not used this fertilizer, have not raised a saleable potatoe this year. I consider it a preventive of Rot. G. PREAUT.
Westchester Co., N. Y., Sept. 29, 1850.

Extract of a Letter from E. B. Addison.
Alexandria Co., Va., April 22, 1851.

Dr. John H. Bayne, President of Prince George's Co. Agricultural Society, Maryland, has desired me to inform you that last spring he used African Guano, Poudrette, Peruvian Guano, and your prepared Guano on Potatos. The first two were distanced, but the result from the Peruvian and yours, was about equal. He pronounces your Prepared Guano to be a very excellent article, and esteems it highly.

Richmond Co., N. Y., July 27, 1849.

"I have made use of Kentish's Prepared Guano on potatos, cabbages, cauliflowers, corn and grapes. I found the result much more satisfactory and the produce much larger than where I used imported Guano or any other kind of manure. EDWARD JENNINGS, Gardener."

It is equally fertilizing on all crops. See the numerous certificates on this subject in the printed circular to be obtained at KENTISH & CO'S Depot,
March 1—m3t No. 159 West-st., City of New-York.

Genuine Superphosphate of Lime.

THE subscriber has now on hand and is constantly manufacturing, at his works in Middletown, Conn., *Superphosphate of Lime*, which he warrants free from any adulteration, and equal, if not superior, to any in the market. It is made of *bones* prepared in the most approved manner, put up in substantial bags for transportation, and is furnished promptly to order or at the works.

He also manufactures, and has constantly on hand for the market, *Bone Dust* of a superior quality.

These fertilizers have been thoroughly tested by careful and experienced agriculturists in this vicinity, and have given general satisfaction. ANDREW COE,
April 1—m3t Middletown, Conn.

Ground Bone.

THE subscribers are now prepared to furnish Bone Dust by the barrel or ton in its pure and most efficient state, ground to any desired fineness. GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Poudrette.

THE LODI MANUFACTURING CO. offer their Poudrette for sale in lots to suit purchasers, from one barrel up to 4,000 barrels, at their usual rates, viz, $1,50 per barrel for any quantity over seven barrels, delivered on board of vessels in the city of New-York free of cartage or other expense. When 200 to 300 barrels are taken, a deduction will be made from the above price. That this article has stood the test of 14 years' trial, is proof of its efficacy. It is the cheapest and best manure for corn ever produced, and it has the advantage of being useful in small quantities and harmless in large. It is a capital manure for peas, strawberries, &c., &c., and all garden vegetables.

Apply by letter or personally to the Lodi Manufacturing Co., 74 Courtland street, New-York.
Jan. 19—w4m—m4t

Peruvian Guano.

WE are receiving our supply of Peruvian Guano per ships Blanchard, Senator and Gray Feather from the Chincha Islands, and now prepared to make contracts for the spring supply. As the demand is large we would advise all who may be in want of this valuable manure to make early application. Price, $50 per ton of 2,000 pounds. Be particular to observe that every bag is branded,

Warranted No. 1 Peruvian Guano.
Imported into the United States by F. BARREDA, BROTHERS,
for the Peruvian Government.
LONGETT & GRIFFING
State Agricultural Warehouse, No. 25 Cliff-street, New-York
Oct. 20th—w&mtf.

Pigs, Fowls, Rabbits and Pigeons.

SUFFOLK AND MIDDLESEX PIGS, Fancy Fowls, Lop-eared Rabbits, and Fancy Pigeons.—The subscriber has now for sale a choice assortment of the above animals, purely bred from *imported stock*, and warranted genuine. Address GEO. P. BURNHAM,
Box 22, Post-Office, Boston, Mass.
Boston, March 9, 1854—w5tm3t

Eggs for Hatching.

THE subscriber offers for sale, during the coming season, Brahma Pootra Eggs for hatching, at $4 per dozen, sent to any part of the United States or Canadas. Expenses paid to New-York, Albany or Boston.

My stock is inferior to none in the United States.

Any one purchasing Eggs of me, that is not pleased with the chicks in the fall, the money will be refunded.

Reference will be given if required.
DARIUS GARDNER,
Jan., 1854—m4t Norwich, Conn.

For Sale or Lease,

5,000 ACRES OF CHOICE FARMING LANDS in Gallatin county, Illinois, in the immediate vicinity of the extensive Mining operations of the Shawnee Coal Company. A cash market for all kinds of farm products at the mines. These lands will be sold or leased to good farmers on accommodating terms.

For particulars, apply to H H. CASEY, Sec'y,
Corner Hanover Square and Pearl street.
New-York, Feb. 1, 1854—m5t

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb. 1—m1y Braintree, Mass.

Contents of this Number.

Will Ashes Dissolve Bones, ... 137
Culture of Turneps, Rape, &c., by J. H. REID—Cure for Burns, Bruises, &c , by E. H., ... 138
Wire Fences, ... 139
Value of Ashes in Agriculture, by T. S. GOLD, ... 140
Culture of Spring Wheat, by G. D. PHILLIPS, ... 141
Tobacco Culture in New-York, by L. KEITH—Buckwheat and Indian Corn, by W. N. FORD, ... 142
Discrepant Opinions—High Prices for Grain, by OBSERVER—Rotting of Fence Posts, ... 143
Gravel Houses—Draining Tile and Pipe, by JOHN JOHNSTON—Notes on Various Matters, ... 144
Wintering Cattle, $300 saved—Sowing Plaster, Ashes, Potatoes, &c., by D. A. BULKLEY, ... 145
Experiments with the Curculio, by JOHN PARSONS, Jr., 146
Culture of Millet—Restoring Worn Lands—Guano for Corn—Advertised Manures, ... 147
Liquid Manure Compost—Experiments in Cultivation—Valuable Paint for Farm Buildings—Cider in Oil Casks, ... 148
Use of Guano in Maryland, by C. V. 149
Muck for Manure—Mice in Unthreshed Grain, ... 150
F. C. L. and Prof. Mapes—Manuring Fruit Trees—Churning by Steam Power, by G. A. HANCHET, ... 151
Plan of a Piggery, ... 152
The Carnation, the Picotee and Pink, by E. SANDERS, 153
Market Apples—Early Cucumbers, ... 154
Horticultural Humbugs, ... 155
New Work on Fruit—Answers to Inquiries, ... 156
Select List of Roses, Phloxes, &c.—Best Wax for Grafting—Profitable Strawberry Bed, by L. A. BROWN, .. 157
Cardinal Wiseman—Quarter-ill in Cattle, ... 158
Bone-Sickness in Cattle, by M. A. CUMING, ... 159
Raising Water by Rams—Oil Cake for Cattle—Houses of Unburnt Brick—To Destroy Thistles, by P. 160
Notes for the Month, ... 161
Answers to Inquiries, ... 162

ILLUSTRATIONS.

Wire Fences, ... 139
Plan of a Piggery, ... 153
The Carnation, the Picotee and Pink, ... 153
Horticultural Humbugs, ... 155
Cardinal Wiseman—a Hereford Bull, ... 158

Peruvian Lama and Vicuna,

FOR SALE, both male animals, in prime condition, just arrived from Peru. J. M. THORBURN & CO.,
April 20—w1t 15 John-street, New-York.

Ketchum's Mowers,

WITH the new improvements, for sale by
LONGETT & GRIFFING,
May 1—m&w 2ms No. 25 Cliff-street, New-York.

Albany Tile Works,

Corner of Patroon and Knox-Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices suitable for land drainage, always on hand in large or small quantities of the first quality, delivered at the docks and railroad depots free of cartage:

Horse-Shoe Tile.
4½ inch caliber, ... $18 per 1000 feet.
3½ do .... 15 do
2½ do .... 12 do
Sole Tile or Pipe.
3 inch caliber, ... $18 per 1000 feet.
2 do .... 12 do

Large Tile for drains about dwellings, yards, &c., of various sizes, $4 and $8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains at $4 per 100 feet. Drain your land and save your crops. Orders from a distance will receive prompt attention. A. S. BABCOCK.
Albany, April 20, 1854—w&m6m

Cider Mill and Press.

HICKOK'S CIDER MILL AND PRESS.—This mill and press is conceded, by all who have seen and used it, to be the best—simple in construction, portable, weighing 275 lbs., and not liable to get out of order. Warranted to work well, and give satisfaction. The first premiums of the American Institute and Crystal Palace have been awarded to this machine. Price, $40. Drawings and descriptions will be sent by addressing the sole agents,
LONGETT & GRIFFING,
25 Cliff-street, New-York.
May 1—m5t—w2tinM,Ju,J,A,&4tinS

Albany Agricultural Works,

Warehouse and Seed Store, 369 and 371 Broadway, Albany.

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"*Emery's Patent Changeable Railroad Horse Powers.*"
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.
Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.
RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co.

Appleton & Alderson's Drain Tile Works,

Corner of Lydius and Snipe streets, Albany, near Mr. Wilson's Nursery.

THE subscribers are prepared to furnish Drain Tile of the various and most approved Patterns, at from $12 to $18 per 1000 pieces. The Tile are more than 14 inches in length and a larger calibre than any of American manufacture for the same prices. We warrant every Tile to be perfectly sound, to fit good at the joints so as to admit water and keep out the dirt, and to drain Land from 12 to 20 feet on each side of the drain, according to the nature of the soil.

Also, large Tile for small brooks and drains about dwellings, &c. at from $4 to $8 per 100 pieces.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at Messrs. L. & W. MERCHANT'S, 71 Quay-st.

Full directions for laying Tile will be sent free to those addressing the subscribers. Orders are respectfully solicited.
Address, APPLETON & ALDERSON,
April 13—weow&mtf 195 Washington-st, Albany, N. Y.

Bone Dust.

BONE SAWINGS, OR MEAL, a very superior article, warranted pure. Price, $2,50 per barrel. Bone Dust, ground quite fine, $2,37 per barrel.

We are prepared to supply all orders for this very superior manure. Samples will be sent if requested.
LONGETT & GRIFFING,
May 1—m3tw2m No. 25 Cliff-st., near Fulton, New-York.

Mower and Reaper.

Forbush's New Improved Combined Reaper and Mower.

THE above patent machine is now permanently established, and its entire success as a Combined Reaper and Mower proved beyond all doubt. This machine will be warranted to be made in a workmanlike manner and of the best materials, and capable of cutting from ten to fifteen acres of grass or grain per day, and in all respects to do the work as well and as easy for the horses as any other machine in the country.
Price of Combined Reaper and Mower, ... $135
" Mower, ... 115
For sale by LONGETT & GRIFFING,
No. 25 Cliff st., New-York.
April 6—w2ta&4tmay—m3t

Fowls and Eggs for Sale,

OF Brahma Pootra, Chittagong, White Shanghai, and Buff Shanghai varieties, choice, and of pure blood. Eggs for setting, by the subscriber.
FRANCIS W. COWLES.
Farmington, Ct., March 8, 1854.—Mar. 30—w1tm2t

THE CULTIVATOR:
A MONTHLY JOURNAL OF
Agriculture, Horticulture, and Domestic Economy.

THE PRICE REDUCED TO 50 CENTS A YEAR.

All subscriptions must commence with the January No. and the payments must in all cases accompany the order for the paper.
LUTHER TUCKER,
Publisher, Albany, N. Y.

Single copies, Fifty Cents—Eight copies $3—any larger number at the same rate.

Postmasters and all friends of agricultural improvement, are respectfully invited to act as agents for THE CULTIVATOR and THE COUNTRY GENTLEMAN.

THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

Vol. II. ALBANY, JUNE, 1854. No. VI.

Foreign Correspondence.

Leipsic, Saxony, February, 1854.

Messrs. Editors—Within an hour's walk of Leipsic, near the village of Moeckern, is situated an *Agricultural Experiment-Station*, some account of which may be acceptable to your readers. About three years since the Leipsic Economical Society came into possession of a farm of some 120 English acres, and with the co-operation of the Leipsic and Chemist's Agricultural Society, determined to establish it as an Experimental Farm. Application to government was followed by legalization of the institution, and an annual appropriation for its support; and finally, certain funds which had been raised by the "Union of the German land and forest lords," for erecting a monument to the great Thaer,* and which remained after the completion of the same, were applied as a Thaer foundation to assist in promoting this useful object. The great utility of such establishments, and the hope that the organization of similar ones in the United States may be encouraged by an account of this, induces me to annex a translation of the important features of the statute relating thereto, and approved by the Saxon government about a year since.

"Under the title 'Ag. Experiment Station, upon the farm of the Leipsic Ec. Society, and the adjoining lands of Dr. Crusius,' is founded an institution to be devoted to the advancement of agriculture by means of scientific investigations carried on in close connection with practical experiment. This object shall be promoted by the co-operation of a practical farmer and a man of science. The investigations and experiments they shall institute, shall be mainly directed to the following particulars:—

"1. The growth of plants—the conditions affecting it generally; and in particular, the influence of the constituents of the atmosphere, of the soil, of manures, and of the preparation of the soil upon it; and also, the various hindrances to vegetable development.

"2. The ingredients of plants and their action on the animal organism. The various kinds of feed, their composition and their valuation for the production of flesh, milk, wool, &c.

"3. Meteorological observations.

"4. The cultivation of plants here little known, and the determination of their value.

"5. Testing of ag. implements and machines.

"6. The construction of authentic tables of comparative numbers, having reference to all branches of agriculture, as for example, tables of the relative value of feed.

"The conduct of these investigations is under the care of a practical farmer, and of a scientific man, and the institution falls therefore into two divisions—that of *practical agriculture* and that of *natural science*.

"The establishment is to be controlled by a Board of Directors, now composed of six members, viz: representatives of the three societies that contribute to its support, one of whom is Prof. Stockhardt—of Dr. Crucius, a noted agriculturist and friend of the enterprise—of Dr. Wolff, director of the scientific, and M. Baehr director of the practical department. Persons or parties contributing $75 may be represented in the Board.

"The directors of the practical and scientific departments are entitled to one vote each, and the other members to one vote for each $75 contributed by them or the society they represent."

Following the above regulations is an extended list of experimental investigations to be carried out during the year 1853. Already two extended reports have been published, embodying very valuable results obtained at this Station. At present the farm has hardly recovered from the neglect of its former proprietor, and with the exception of some fine stock, both of native and foreign breeds, a fair selection of improved implements and the promise of good things to come, presents no feature that may detain us from noticing the scientific department. Lying low and being well watered, the farm has more space devoted to meadow than is usual here. It supports 20 cows, whose milk is daily sold in Leipsic. Only small portions have been thorough-drained; these have been perceptibly improved.

In the scientific department there is little to attract the casual eye. A simply furnished laboratory, and instruments for meteorological observations, nearly completes the list. It is only by studying the reports of the investigations that have emanated from it,—only by considering the long and toilsome preparation of head and hand, endured by those working here, in fitting themselves to stand upon the outposts of knowledge, and conquer for her new possessions from the sway of mystery and darkness,—only by watching them, day after day, laboriously accumulating facts and eliminating truth by processes as tedious and complicated as those which serve to separate the glancing metal from the unsightly ore, that we can appreciate the scientific department. It has been, since its foundation, under the control of Dr. E. WOLFF, a gentleman combining in a high degree the qualifications that are demanded by his position. He is at present assisted by Dr. RITTHAUSEN, and several young gentlemen.

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* In a conspicuous position upon the public promenade of Leipsic, stands a collossal bronze statue of Thaer, mounted on a marble pedestal, which bears an inscriptirn to this effect—"To their honored teacher, Albrecht Thaer. The landlords of Germany, 1850."

The investigations carried on here have had especial reference to the production of milk, of flesh (mutton,) and of manure under various circumstances. A very great number of analyses have necessarily been performed, and have been so executed as to command the confidence of all capable of judging of their value. In a following communication I shall give some of the results obtained here, and will at present, with your permission, occupy a little space in urging the establishment of similar "Experiment Stations" in the United States.

It would not be difficult to name several gentlemen of wealth, owning fine farms, fine cattle and other live stock, accustomed to farming in a liberal and enterprising manner, who thus have just the "Station" where experiments could be most advantageously prosecuted. An annual outlay of a few thousand dollars, would support series of investigations, which, if conducted by men of proper ability, could not fail to be highly profitable. State Ag. Societies here may find a field of labor, yielding results not second to any of those that now follow their useful efforts.

The Transactions of the N. Y. Ag. Society, for example, contain many valuable papers, but very few of them bear the stamp of remarkable excellence; very few of them have announced important *principles*. With facts they are replete; but they do not present many subjects in so varied aspects, do not so exhaust observation that a generalizing mind can deduce from them statements of universal application.

What agriculture most needs, is the *establishment of its doctrines*—not the proposition of fancies, or of facts which hold good for this or that township, but the evolution of a *general theory*, applicable everywhere. Engineering is a matter of certainty; navigation could not exist without a scientific basis, and agriculture can only get out of its teens by taking hold of all the dim lines of fact and following them out to where they converge to splendid foci, standing in which one can look back and see harmony where otherwise only confusion and contradiction would appear. If agriculture would do manly things, it must think manly thoughts. If it would accomplish great results, it must find the centers of power. A child that turns the valves of an engine, can control safely the railway train that an army of elephants could not check without disaster. The basis of doctrine will not rapidly unfold itself. It must be unfolded. If agriculturists would know, they must inquire. The knowledge they need belongs not to revelation, but to science; and it must be sought for as the philosopher seeks other scientific truth. When farmers contribute to the carrying on of investigations having for an object the discovery of the laws of culture and vegetable growth, and conducted by minds that bring to their task the requisite vigor, skill and knowledge, then light will flood in, where now is only obscurity. When Ag. Societies make Experiment Stations their care and pride, they will more fully and legitimately approach the accomplishment of their end, the perfection of agriculture.

The discovery of new truth and the diffusion of that already learned, may be most appropriately carried on together. He that is so thoroughly acquainted with all that is known with reference to every topic as to be able to investigate the unknown; he who stands so advanced upon the outposts that he can look into what lies beyond, is of all the most capable of instructing others. The doctrine of AGASSIZ, that the teacher and investigator should be one, is most true. He who would teach, must command respect by an ability to impart more than the people can find in books. He who makes researches, should teach in order to keep before his mind the deficiencies of present knowledge.

While appeals to Legislatures have been made in vain for the endowment of agricultural schools—while the means of agricultural instruction are comparatively nothing, and of accurate experimental investigation absolutely wanting, it remains to private or corporate enterprise to open the way; and this is no unsafe adventure; but, with no need of extravagant outlay, will bring an ample return. The active minds of Europe are united in their expressions of admiration and astonishment at American progress, but here the means of genuine advancement in agricultural knowledge are vastly superior to our own. How long shall this be?

S. W. JOHNSON.

We hope the suggestions of Mr. JOHNSON will receive, as they merit, the attention of the officers of our State Agricultural Associations, and of the enlightened and liberal friends of agricultural improvement. We have as a people, talked much about agricultural education, but as yet have done little to promote its advancement, and absolutely nothing towards developing the true principles of the science of agriculture. We had hoped and still hope, that our State Agricultural Society would take the lead in devising and carrying into effect some feasible plan for the promotion of Agricultural Science. An institution, like the one described by our correspondent, where science and practice should go hand in hand—where the results of the laboratory should be tested by exact experiments on the farm—where the multitude of questions that are constantly arising in the minds of intelligent farmers, with regard to the adaptation of manures to particular crops and soils, the best manner of feeding animals, &c. &c., should be decided by the investigations of chemistry and actual experiment, could not fail to be of immense practical advantage to every farmer.

Profits of Accurate Farming.

Statement of D. D. T. More's Profits for 1853.

We have been favored by Mr. MORE, with the accompanying transcript from his farm books for the past year. He has for some years practiced keeping an accurate account of every item of expense, and also of every cent received, and of charging the land devoted to a particular crop with the expense of cultivation, and crediting it with the produce. This system is one worthy of adoption by every farmer. It shows how much the farm produces, the cost of carrying it on, and affords a balance sheet full of suggestions for next year's work. The soil of Mr. More's farm is light, and has, under his superior tillage, been restored from an exhausted condition to a high degree of fertility.

June Potatoes—4¾ acres.

One hundred sixty-two barrels sold,		$161 73
31 bushels small potatoes for seed at 30c	$9 30	
Labor of planting and cultivating,	25 00	
Digging and assorting,	19 00	
Marketing,	23 00	
		76 30
Amount of profit,		$85 43

Mercer Potatoes—10½ acres.

Amount of sales, mostly at 50 cents per bushel,		$781 00
61 bushels seed at 30 cents,	$18 30	
Labor of planting and cultivating,	48 00	
Digging and assorting,	65 00	
Marketing 640 barrels at 10 cents,	64 00	
		195 30
Amount of profit,		$585 70

Oats—10 acres.

Amount of sales,	$174 00
Expenses of cultivating and harvesting,	135 25
Amount of profit,	$38 75

Early Sweet Corn—2 acres.

Amount of sales,	$58 23
Expenses cultivation,	40 00
Amount of profit,	$18 23

Strawberries—1½ acre.

Amount of sales,	$235 23
Expenses,	91 50
Amount of profit,	$143 73

Asparagus—¼ acre.

Sales, 902 bunches at 12 cents each,	$108 24
Expense of cultivation,	29 32
Profit on 40 rods,	$78 92

Rye—50 acres.

Sales of Rye and straw,	$1,132 71
Expense of cultivation and harvesting,	375 50
Amount of profit,	$757 21

Indian Corn—8 acres.

Amount of sales,	$340 00
Expense of cultivation,*	244 80
Amount of profit,	$95 20

Long John Potatoes—5 acres.

Amount of sales,	$354 25
Expense cultivation,	90 25
Amount of profit,	$264 00

Peach Orchard—5 acres.

Sales, 858 baskets fruit,	$501 00
Expense of gathering, marketing, &c.,	135 00
Amount of profit,	$366 00

Sweet Corn—12 acres.

Amount of sales,	$459 73
Expense of cultivation, &c	185 25
Amount of profit,	$274 48

Pasture, 30 acres; meadow, 10 acres; garden, yards and lanes, 3½ acres; pasture for pigs, 2 acres—keep 10 cows, about 100 fowls.

Sales of eggs, butter, milk, poultry, pigs, produce of garden, and cash received for pasturing,	$576 54
Expenses,	225 00
Amount of profit,	$351 54
On hand 400 gallons currant wine, worth $1,	$400 00
Expenses of manufacturing, raising, &c.,	200 00
Amount of profit,	$200 00

Recapitulation.

Whole amount of sales,		$5,282 66
Whole amount of expenses,		2,023 47
Whole amount of profits,		$3,259 19
Deduct the interest on 78 acres of land valued at $15,000, at 7 per cent,	$1,050	
Rent of 80 acres of land,	205	
Taxes,	42	
Wear and tear of tools,	100	
		1,397 00
Clear profit on 159 acres of land,		$1,862 19

Mr. More experimented the past year considerably with guano, and is confident that upon the corn crop the increased product made the expenditure a profitable one. A solution of it applied to a portion of his strawberry plants, gave a manifestly greater crop, both in size and quantity. Two acres of land, planted to sweet corn, which were already in a high state of cultivation, did not yield more abundantly for the application of guano, and a portion treated with superphosphate of lime showed no perceptible increase of product. A part of ten acres of land in oats, also previously highly manured, received a dressing of guano, but this portion did not produce more grain than the other, though the growth of straw was somewhat heavier. Mr. More has purchased four tons of guano for use the coming season, and will experiment more accurately with it. He also used the superphosphate of lime last year, but is not prepared to speak decidedly with reference to its value as a fertilizer on his light soil. He regards the turning in of clover and green crops generally as the most profitable manure for his farm, while he husbands most carefully all the animal manure, even to the droppings of his fowls.

The value of barn-yard manure is not reckoned in the expense, as it is produced and remains upon the farm. When special fertilizers were used the expense is charged. Some of the crops raised by Mr. More are such as farmers remote from markets could not raise profitably, but the bulk of his profit is on field crops which command a ready sale in all sections and at all times. This balance is probably a larger one than most farmers will be able to secure, but it shows what accuracy, foresight and energy can accomplish. Who will now say that farming cannot be made lucrative? or who need seek a more profitable investment of money than in a farm which under proper management can be made better year by year? Add to this the fact that tilling the soil is a pleasant, healthful and scientific calling, subject to no sudden ups and downs, and we are forced to the conclusion that the farmer who lives up to the spirit of the age, who cultivates his soil understandingly and his mind assiduously, is the most independent and well to do man of the times, the true COUNTRY GENTLEMAN.

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* The field was highly manured, a crop of rye turned in, and one ton of guano applied, which accounts for the large expense

How to Build a Good Fence.

L. TUCKER, ESQ.—In writing to you a few weeks since, asking for information respecting draining tile, I promised to send you a description of a fence, which I have found to answer well here.

My farm consists of 130 acres. I bought it three years ago, from one of our old Canadian farmers. It was a model farm, under his management, for burrs, Canada thistles, June grass, foxtail, and all other matters and things of this sort, as well as for bad fences—there were not good rails enough on the whole place, to make 50 rods of fence. The old man and his neighbors' cattle had many a contest, to know which should hold possession.

After coming into possession, my first effort was to get a good outside fence. This I soon accomplished, by building something over a mile of common board fence. This was constructed in the usual way. But next, I needed cross fences, for the farm was all in one field, and I designed laying it out in eight acre lots. I found, on a short calculation, that in accomplishing this, I had to build over 3 miles of fence; and to get a good fence at the least cost, was what I wished. My neighbors could not learn me much in reference to the matter, either by example or precept, so I had to figure it out.

My first operation was to purchase 300 saw logs in the woods. These were drawn to a saw mill with my own teams in the winter. Next I bought about one thousand cedar posts, and cut and drew home nearly another thousand. The lumber was partly drawn by my own teams, and partly by others. As soon as the spring opened, I commenced operations—this I did by squaring off my intended fields, and putting in stakes on the lines of the fences. This done, my plowman commenced his part, by throwing three furrows to each hand, leaving as large a space in finishing, or between them, as convenient. He then altered his clevis, and went down with another furrow as deep as he could run the plow—returning in the same furrow to throw up the loose earth. I found that he got down full 15 inches. Two men now commenced sinking holes eight feet apart and one foot deep in this furrow, or ditch. In soft clay or loam, they dug 86 holes in about three fourths of a day. As soon as the holes were dug, we commenced putting in the posts. This is a simple operation, but it is best done, I think, by first setting every tenth or twelfth post in lime, and then using two good strong cords stretched from these to guide the man in setting the rest.

I do not think that it is of any use to pack the earth hard round the posts. In fact I believe it does harm. As soon as the posts are set, we strike a line on the posts, two feet three inches above the natural level of the ground; the bottom board, about twelve inches wide, is now nailed on, its upper edge even with the line. The plow is again called into requisition, using, however, only one horse. The earth that had been thrown from the line of the fence, is now turned back. This is done by throwing in three furrows on each side, and then throwing these up again. Two more boards, six inches wide, are now nailed on—the first with an opening of 6 inches, and the second 8 inches. The nails used thus far, are common two-and-a-half inch cuts, but in nailing on the battens, which I do on each post, we use four inch nails, putting one through each fence board.

The next operation and last, as far as the fence is concerned, is to set two men to finishing the banking. This is a quick and simple operation—one goes ahead and throws up the loose earth out of the ditch; the second clears out the ditch, and finishes the bank. Timothy seed is at once sown on very thick, and the bank is slightly lamp'd down with the back of the shovel. Two men will easily finish the banking of 40 rods in a day.

Such a fence when finished, will cost here less than forty-five cents per rod. It will be five feet high from bottom of ditch—it cannot be jumped by any common animal—it occupies with me 5 feet of land—it is easily built, a large share of this digging and bauking being done by horses, and all the rest is performed by common farm laborors—it is quickly built—the posts never heave, even in softish or wettish soils—the water cannot freeze round them, and they will last longer than posts set in the common way.

If you deem this worth publishing, I may trouble you again with an account of some of our doings in these parts. I think more of our farmers should take the *Country Gentleman*, and write you now and then to let you know what we are doing in Canada. I am only a beginner in farming, but I have raised crops on my Thitly Farm, that I guess would be hard to beat. I have tried guano, and will try it again; but the manure from the yard, well rotted, and freely used, rather goes ahead of it. I have bought, made and used over fifteen hundred loads in about two years and a half, and I find it pays. Yours, J. SIMPSON. *Bowmanville, C. W., March* 28, 1854.

Water in Lead Pipes.

MESSRS. EDITORS—Various newspapers at the present day, are full of the evil effects of having water run through lead pipes. Some accounts state that individuals have lost their lives in consequence of using water which has run through a lead pipe, and others that they placed fish in a tub of water, which lived only two hours after being put in the water. Is it not more probable that the water possessed the unhealthy or poisonous effects within itself, or that it contained within its mineral properties, some substance which caused the lead pipe to corrode, and thus communicate poison to the drinker? In proof, I will say that I bring water from an excellent spring, one hundred and twenty rods, through a half-inch lead pipe with only six feet head and fall, into a cistern lined with lead, and I cannot perceive any evil effects as yet; and I placed in a tub which takes the waste water, trouts at sundry times, and they lived in the enjoyment of good health from four to six weeks at a time, and until they jumped out upon the dry ground while at play and died before seen. A. D. ARMS. *E. Montpelier, Vt.*

Farming in Tennessee.

A subscriber in Van Buren Co., Tennessee, gives the following account of the state of agriculture in that vicinity. He hardly need to have added that the farmers generally were opposed to book farming. The detail he gives of their practical operations is sufficient to prove that they have no faith in agricultural publications or associations. He says:—"Farming in this part of the State, is in a wretched condition. Not one man in ten will allow allow his land to be ruined with a "*big plow.*" I do not know of more than half a dozen *two-horse* plows in the county. And such a thing as a plow requiring more than two horses is unheard of. The land is all *scratched* over in March and April for the summer crop. The instrument used is here called the "bull-tongue plow." It is about ten or twelve inches long and four inches wide at the widest part, turned forward so as to run under the surface about two inches, or probably a new one will reach to the depth of three inches. This does not pulverize the soil by any means. What is turned up is left in great clods until "*melted by rain*" or broken by the same instrument in tillage. Such a thing as a harrow or roller I have yet to see for the first time in this county (Van Buren.) Corn is almost the only field crop depended upon. Oats are sown by some farmers to "rest" the land after corn has been taken from it for a series of years. Some raise enough wheat to allow them "biscuit every Sunday morning." There are not many farms that produce more than thirty bushels of corn per acre. You will doubtless be surprised that it can do this under such tillage. The land is as productive as can be found anywhere or it would not. Cattle and hogs are the principal stock raised. They are all of the commonest kind. The cattle are generally very small, being fed on the husks of corn in winter and pastured on the coarse mountain grass in the summer. Hogs are of the land-pike breed, (if you know such an one,) and scarcely ever see corn from the time they are small pigs until they are two or three years old, when they are fattened. They subsist on acorns and roots, and are the more highly prized from being "*shifty.*" It requires from fifteen to twenty bushels of corn to make them weigh one hundred and seventy-five or two hundred pounds. They are generally fattened by being turned into a lot containing from one to two acres, and fed as much raw corn as they can eat and waste, for about two months. No animals are put under shelter but horses, and many of them are not. Some few horses are raised for sale, but the people find less profit in this than any other kind of stock. They are fed, almost exclusively, on corn, and the blades stripped from the stalk in August, and cured. *Hay is not known.* I do not believe that there are ten acres in the county, from which hay is cut. I will not describe barns, barn-yards, fences, &c., for you can imagine these from what I have told you of other things. Fruits are almost entirely neglected. I have been here for three years, and have been constantly endeavoring to try and get the people to quit this skimming, impoverishing (both of land and man) system, and to adopt a renovating, enriching system. All say that I will find my theories all fail in practice, that *book farming* will break a man up, &c.

I have bought me 250 acres of good sandy land, and I am going to try and show these people that all I have said was not "wild theory."

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Reduction of Bones by Ashes.

L. Tucker, Esq.—I believe that the reduction of bones by means of ashes, as spoken of in the *Country Gentleman* of Feb. 9th, would require from two to five or six months, depending partly upon the strength of the ashes, but more upon their being kept suitably moist. If too much water is applied, they will leach, and a portion of the potash will be lost; if too little, the organic part of the bones will escape in the form of ammonia, sulphuretted hydrogen, &c., thereby at once diminishing their value as a manure, and rendering the premises disagreeable and unhealthy. As much water should be applied as the ashes will hold, without leaching; and the bones should be kept perfectly covered.

There are some difficulties attending this process; it requires frequent attention—the hogshead, or other vessel, in which the ashes and bones are placed, must be away from any building, and yet must be in a cool place—probably some gaseous matter will escape at last; and I did not therefore intend, nor do I now, to recommend the reduction of bones by ashes as a general thing, and certainly not where there are large quantities of bones to be disposed of; for in that case it is quite worth the farmer's while, to procure sulphuric acid—from ¼ to ⅓ of their weight—and reduce them to a superphosphate—rather to a mixture of phosphate and superphosphate—as has been recommended in nearly all our agricultural papers. What I wished to say, is, that where, as in many families, there are a few bones and a few ashes, wanted for no other than agricultural purposes, they may be preserved in the way I have described, without any very great loss of their fertilizing properties. In this way, the bones of the preceding year may be reduced to a condition for tolerably prompt action—not as prompt as if reduced by sulphuric acid—by the time for planting, with the exception of a few of the last, which will be found to be hard, and may be again treated with ashes and kept over till another year. Theoretically the idea of reducing bones by ashes does not look well. It would be said, that the alkali will drive off the ammonia from the organic part of the bones. Such is undoubtedly the tendency; and will be the result, to a great extent, if the whole process is not well managed, and perhaps to some extent, if it is managed in the best way possible. It might also be said, that the phosphate of lime, of which two thirds of the bone is composed, will remain a phosphate still, instead of being changed to a superphosphate. This I suppose is true; and as the phosphate is less soluble than the superphosphate, I have no doubt that bones reduced by ashes act somewhat less promptly than those dissolved in sulphuric acid. But for that very reason they act more permanently, and so may be of nearly equal value in the end. Yours truly, J. A. Nash. *Amherst*, *April* 20.

Cement Pipes for Water.

MESSRS. EDITORS—In looking over a late number of the *Country Gentleman*, I notice that Mr. S. D. T. of Fergusonville, is desirous of learning the best way to bring water to his building, and if water lime can be laid with safety. I will try to give you what little knowledge and experience I have had in bringing water through what we call cement pipes, and think it the best for common purposes, if well laid.

I dug the ditch from the spring to the house, 3 feet deep, of sufficient width for a man to work in conveniently. The spring was about 3 feet higher than my house, and the water had to run through a hollow of from 8 to 10 feet in depth, of a gradual ascent both ways. The pipe I laid was of an inch bore. The mixing of the mortar is too well known to require explanation. The bottom of the ditch wants to be made smooth and of a shape to receive the mortar. The manner of laying the pipe is to have a trough 6 ft. long, 4 inches in depth, and 3 in width in the bottom, flaring towards the top. This trough is filled with mortar; then turned bottom side up in the ditch. The rod then is imbedded in the mortar and another trough full is turned on that, and smoothed around with a trowel. The rod must be carefully drawn, until it can be turned up so as to admit of another trough full. At the end of the rod there must be a short piece of rod attached by a cord some 6 inches long, to smooth out anything that might happen to crowd in behind the main rod. At the lowest point in the hollow, we inserted a piece of lead pipe in the side of the main pipe, for the purpose of cleaning it whenever the sediment obstructed the free passage of the water. By pulling the cork from that piece of pipe, the water will rush through and cleanse it thoroughly. You can set a barrel with both heads out, over the let-off place, so that it can be easily got at, at any time.

It is necessary in laying through hollows, that the pipe should be some heavier and a sufficient time for it to harden. When you arrive at the summit on the opposite side from the spring, you there insert an air tube, to come near the top of the ground, protected in some way to let off the air that will collect at that point. If not let off, it will prevent the water from passing.

Pipe, laid in this way, I used twelve years, and left it in the eastern part of the State of New York, in perfect order. I laid down some lead pipe about three years after, that was a source of considerable trouble from bursting.

I should have said that the sand should be coarse, and washed free from mud and dirt. The proportion that I used was ⅔ sand to ⅓ water lime. W. P. *Lorain Co, Ohio.*

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CREAM.—The first fifth portion of milk from the cow contains about one twentieth part of cream; the second fifth, one twelfth; the last fifth, one sixth. How important then to be careful to get the last and richest drop, even if it were not true that cows are quickly dried up by a slovenly practice of leaving a small portion in the udder.

Plowing in Green Crops.

I see in the last vol. of *The Cultivator*, p. 300, an article under the head of green manuring. That part which attracted my attention, was the process of throwing the green crop flat on the ground for plowing under, with a roller, harrow or chain. I have invented another method, something different from the above, which is very cheap, and does the work to perfection, without any extra labor for the team. The process by which this is performed is as follows. Most farmers are acquainted with the gage roller that is attached to the beams of some plows to prevent their going too deep. This roller is placed in an iron frame, fastened to the beam of the plow, and hangs in the lower part of the frame, rolling on the ground to gage the depth. The improvement consists in having a three quarter inch round iron bolt fifteen inches long, passed through the frame and gage roller; then put a roller on each end of the bolt, five inches long. This makes three rollers running all abreast, which will roll down a strip of grass or other green crop fifteen inches wide. These rollers will not pass off the top ends of the grass before the plow will be turning the other ends under. Thus it will be seen that the work is done at the same time and to perfection, without making it any harder for the team. I offer this improvement for the benefit of my fellow agriculturists. ELIJAH HOAG. *Keeseville, N. Y., 2nd Mo.* 1854.

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Influence of Agricultural Papers.

Our agent at Columbia, (Conn.) in remitting a list of subscribers, remarks:—"I believe this makes a respectable list for a rural town with less than 1,000 inhabitants. You will find by your books, that from the publication of the first no. of *The Cultivator* to the present, you have had subscribers in Columbia. What little our mite has been towards the pecuniary support of the paper has doubtless been gratifying to the publishers; yet, after all, in my judgment, the great reward has been ours. It has stimulated to emulation and improvement. A spirit of inquiry has been waked up, in regard to agricultural interests and horticultural improvements, which is visible in every section of the town. Better crops are raised—better farm buildings are being erected—better stock is beng raised and selected—and horticultural and rural embellishments are springing up in and around our dwellings, which plainly indicate that their inmates have been made acquainted with the suggestive topics of the "Agricultural papers."

"Last fall our county formed an agricultural society, and held a fair about six weeks after its formation. This town furnished a good list of members, although at the extreme south of the county, and took some five or six of the first premiums, while another town in the county, with three times the inhabitants, and equal natural advantages, but takes no agricultural papers, furnished no members, and took no premiums." [We did not suppose there was a town in old Connecticut, where the people were all so far behind the age as to be entirely without an agricultural journal. No wonder they did not take any prizes or furnish any members for their County Ag. Society. Such Societies are sustained by those who read.—EDS.]

Stick to the Farm.

BY HENRY F. FRENCH.

Stick to the farm, young men. Now when land and its products, the true wealth of the nation, are within your control—when corn and wheat, and hay and cattle, and the produce of the dairy bring double their former prices, while the wages of farm labor, always the last to be affected by fluctuations of business, or political affairs, have advanced comparatively little; now, when the nations of the earth are re-converting their plowshares and pruning hooks, into swords and spears, when great armies are gathering together to destroy each other, and lay waste the beautiful earth, which God has given to man to "till and to keep;" now, when the labor of whole countries is diverted from producing the means of feeding and clothing and sheltering and blessing mankind, to a worse than idle consumption of the produce of your labor; now while the farmer is rapidly gaining the respect and wealth and influence due to his position as "lord of the land," be not seduced from your honorable and independent place, by whisperings of ambition, urging you to seek for wealth or ease, or honor, in a city life.

You are tempted to exchange the hard work of the farm, to become a clerk in a city shop, to put off your heavy boots and frock, and be a gentleman, behind the counter! You, by birth and education, intended for an upright, independent, manly citizen, to call no man master, and to be no man's servant, would become at first, the errand boy of the shop, to fetch and carry like a spaniel, then the salesman to fill the place which at best, a girl would fill much better—to bow and smile and cringe and flatter—to attend upon the wishes of every painted and padded form of humanity—to humbly suggest to rakes and harlots, as well as to starched and ruffled respectability, what color and fabric best becomes the form and complexion of each—and finally, to become a trader, a worshipper of mammon, as Carlyle says, "a kind of human beaver that has learned the art of ciphering," compelled to look anxiously at the prices current of cotton and railroad stocks, in order to learn each morning, whether you are bankrupt or not, and in the end, to *fail*, and compromise with your creditors and your conscience, and sigh for your native hills.

Or, perhaps, your party being in power, you would obtain a clerkship at Washington, and remove your little family from the north, to a more genial climate, to live at your ease, and grow rich on twelve hundred dollars a year! You give up your little farm, your New England privileges of schools and churches, your independent and influential membership of parish, and district and town and church, the woods and play grounds for your children, your friends and kindred and *home*. Twelve hundred dollars is a large sum to you, half the price of your farm perhaps, twice the amount of the minister's salary. With your habits of economy and thrift, you can live on half the amount. Your arrangements are to be made. The homestead is sold, and you are *landless*. After all, it is not so easy parting with our household gods. The trees our hands have planted take root in our hearts, the vines and roses, twined by our own fingers, and those of our loved ones, over rustic arbors, cling round us more closely than we thought. Your labor has been mingled with the soil of every field. Tears are in the eyes of your wife, at every thought of departing, but she trusts in your superior judgment, and no murmur escapes her lips at your decision.

You have left your home. At the end of a single year in "the city of *magnificent distances*," you have bitter realizations of the meaning of that phrase. It has proved indeed to be full of magnificent distances, for you, from happiness, from independence, from advantages of every kind. For the first time, you have felt how sore a thing it is, for a northern freeman to be dependent, to labor at stated hours, at the bidding of a superior officer, to feel that the office you fill, on which depend your very means of living, for yourself and family, is held at the arbitrary will of another, who may, if he please, make a servile conformity of your views with his own, on political or what you may deem moral questions, the condition, by which you retain your place. You, who at home, had never seen the man who dared claim to be your superior, are forced to submit to the iron rule of caste, to send your card to the Secretary, whom you once knew perhaps as an equal, and wait an hour, with the colored servant in the hall, to be told at last, to call another day—to be slipped over, or shaken off by the "member" whom you helped to elect, and who had now no further use for you; and consume your energies in endeavoring to keep the toe of your boot from proximity with that part of his person, where his honor holds its seat—to be assessed to support party presses, whose principles you may despise. In short, you have sold your manhood for an office, your birthright for a mess of pottage. But the half is not yet told, for the mess of pottage even, is not sufficient for your wants. Your salary is at starvation point. You must pay two hundred dollars for a house, with two parlors and a basement for servants, without a cellar, without a closet, without a pump or aqueduct, without a sink, or clothes-yard or garden. Your wife with the aid of a servant, cannot do the work so easily as she did it alone, at the north. All the water comes from the city pump a dozen rods off in buckets; the slops are poured into the street, your clothing is crammed into wardrobes, your supplies must be procured daily at market, in contemptible quantities—in short, everything, except the parlors, which are for show, and to make you seem respectable, must be richly carpeted and curtained, everything else is adapted to the idea, that labor is degrading, and that the comfort and convenience of those who perform it, is not worth consulting. The thrift, and energy and comfort of northern households, is unknown in this latitude.

Look now, at the prices of necessary articles of food. On your farm, however small, your cellar was always filled with an unlimited supply of all such vegetables, as you desired, and barrels of beef and pork of your own slaughtering. Your granary had always, as much of corn and rye, and perhaps of wheat, as you chose to use. Your cows gave you milk and butter in abundance at all times, and your garden and orchard, fruits for yourself and the children, and the neighbors, without stint. Now, (I give actual market prices in Washington) you buy one peck of potatoes for "three levies," or thirty-seven and a half cents, beef at sixteen cents a pound, turkeys at from one dollar and a quarter to two dollars each, chickens, with the shells scarcely off their heads, not larger than robins, at twenty-five cents each, butter at thirty-one cents a pound, and milk at eight cents a quart, and so on to the end of the chapter. Instead of enjoying the abundance of the earth, as you have been accustomed to do, you begin to associate the idea of dollars and cents, with the food on your table; you are compelled to vex yourself with economizing in the details of living, instead of by system, and to feel your soul gradually narrowing in, to a conformity with narrow circumstances. You find yourself a poorer man than while upon your hard northern farm, poorer in your animal means of living, poorer in comparison with those around you, poorer in independence, in prospects for the future for yourself and family, poorer in everything.

We might follow this train of thought into further details, did time allow it, but enough it is hoped, has been said, to induce an independent Northern farmer to hesitate long, and consider well, before he exchanges his position for any place, where any *master* comes between him and his Maker.

The beautiful lines of Mrs. Sigourney give a truthful, though poetical picture of Farm Life :—

Saw ye the farmer at his plow
As you were riding by?
Or wearied 'neath the noon-day toil,
When the summer-suns were high!
And thought you that his lot was hard?
And did you thank your God,
That you and yours were not condemned,
Thus like a slave to plod?

Come, see him at his harvest home,
When garden, field, and tree,
Conspire with flowing stores to fill
His barn and granary.
His healthful children gaily sport
Amid the new-mown hay,
Or proudly aid with vigorous arm,
His tasks, as best they may.

The Harvest Giver is his friend,
The Maker of the soil,
And Earth, the Mother, gives them bread
And cheers their patient toil.
Come join them round their wintry hearth,
The heartfelt pleasures see,
And you can better judge how blest
The farmer's life may be. *Exeter, N. H.*

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Monument to Mr. Downing.—The committee appointed at the last session of the American Pomological Congress to obtain funds to erect a monument to the memory of the late A. J. Downing, have received for this purpose about one thousand dollars. The Horticulturist states that it is proposed to place it in some of the public grounds at Washington, and that the design is a vase of pure white marble elaborately carved, on a pedestal bearing a suitable inscription. The whole to be nine feet high.

Home Manufacture of Poudrette.

Inquiries like the following have often been made, and many have desired to know how they could avail themselves of a valuable manure, and at the same time render the apartments alluded to entirely free from any odor. Information on the subject of economy and cleanliness combined, which could not be obtained in any other way, we have no doubt will be acceptable to many of our readers :—

"Will you please inform me the best and most convenient mode of manufacturing night soil into poudrette, so that it may be drawn on land and spread without any odor, or inconvenience—my inquiry refers only to home use, of this powerful manure. B. G. *Oneida Co., N. Y.*"

The contents of privies, commonly known under the name of night soil, furnish an exceedingly powerful manure when properly manufactured, and under right management, the process will destroy all the effluvia arising from those deposits, and render the closets entirely inoffensive.

When a resevoir or small stream of water is at command, so that a current may be made to sweep through several times a day and carry off the contents into the manure yard, or into a covered bed of peat or a compost heap, this forms perhaps the most perfect mode of removal. An essential requisite however, is freedom from the influence of frost, and the closet should therefore be connected with the dwelling where the reservoir of water may be kept from freezing, and from which there should be an underground channel of considerable size and slope. We have known all this to be perfectly accomplished by means of a lead cistern in the upper story, which was kept supplied with rain water at all times from the broad roof of the house, and which was sufficient besides for baths, washing, and all other domestic purposes.

When a current of water cannot be used, the next best contrivance, is to form a strong tight box, of matched pine plank, and give it two or three coats of coal tar, so as to render it durable, and proof against moisture and warping. It is to be placed on two runners like those of a sled, made of plank or scantling, to the forward end of which a chain and iron hook are attached, so that it may readily be drawn off by a horse. This box must be of such a size as to fit a cavity made on purpose under the building.

The next thing is to provide a supply of some efficient deodorizing substance. Dry sawdust or thoroughly dried peat does tolerably well, with the occasional addition of ashes and powdered charcoal. Charcoal dust alone, is much better, and if daily applied in small quantities will nearly destroy all smell; but it is absolutely essential to success that a full supply of this material be kept near at hand in a large box or hogshead in a shed or out-house, where it shall be always dry and in a condition to apply every day, summer and winter. Animal charcoal is still more efficient than common charcoal, and may be made to form a portion of a material made as follows :—Make a pile of peat, turf, old straw and brush, mixed with tanner's shavings and broken bones; let the pile become dry enough to burn, and then cover it with sods and set it on fire. It should be suffered to burn with a slow, smothered combustion, so as to char without consuming the materials. When the process is completed, the whole heap, including the turf covering, should be well mixed together and broken fine, and then placed in a large box under shelter, for daily use. Any portion of clay introduced by means of the turf, and well dried, forms a powerful absorbent of fœtid matter. As often as may be convenient, a horse is hitched to the hook and chain, and the whole is drawn off into the barn-yard, when it is quickly discharged by turning the box upside down; and after covering the bottom and sides with the prepared material already described, it is replaced as before. The strong manure thus obtained, will, if well mixed, possess but little odor, and may be used directly, or may be mixed with common manure in the compost heap. Durable plank should be placed under the runners, to prevent their sinking into the earth, and to enable the horse to start the box easily. It is said that those who are employed to obtain the materials for the wholesale manufacture of poudrette, throw in before commencing operations, a few quarts of a strong solution of copperas, which immediately neutralizes the effluvia, and adds to the value of the manure.

Since the above was written, we have received the following:—

The different modes of saving as well as making manure very properly engage the attention of agriculturists to a great extent. There is one mode of saving manure, however, which is very much overlooked.—The farmers, generally, in building a "palace,' for the accommodation of the household, either dig a pit to a great depth, or a shallow one with a moveable building, to be removed as often as the pit becomes filled. In the former case, there is fitted up a complete nuisance, (after a year's existence) and a trap to frighten mothers and nurses. The latter is a nuisance from the beginning, and a subject of complaint almost everywhere. The plan I have adopted is simple and cheap—leaving the "palace" as sweet as any chamber in the house, and productive, yearly, of a tank of manure worth twenty-five dollars—a species of poudrette, I venture to say, more fertilizing than any that can be purchased.

I have sunk a tank or pit, ten feet square and four feet deep, and lined with plank—stone or brick walls would, perhaps, be better. Upon transverse beams is built the "palace," five feet square. From the kitchen and wash-house, I have underground sewers emptying into this tank, through which all the slops of every description pass. The seat is fixed on hinges, so that the whole top may be opened up, and at this opening is deposited all dirt accruing about the house, including the ashes from two fires. The dirt and ashes absorb all the slops and moisture, and prevent the slightest unpleasant smell. This tank may be filled once or twice a year, and each filling would be worth to the garden the sum before mentioned. It is astonishing that this is so much neglected by persons, even, who know the value of manures, and can appreciate cleanliness and convenience. B. B. *Pittsburgh, Pa.*

Culture of the Carrot.

A correspondent recently inquired "if carrots could be grown two years in succession on the same ground, and what manure was best for them." In answer to this inquiry:—

Mr. G. W. Durant of Rensselaerville, says—"I have planted the same ground to carrots, for the last six years, and with the exception of last year, the crop has improved with each year's cultivation. Last year the draw-back was occasioned by planting a little too thick. I have manured every other year; but think it would be better to manure lightly every year. Mine is a clayey loam, and I have manured with spent tan-bark, used first as bedding for my horse stable. My method is to back furrow the ground in beds four or five feet wide, and then plant in drills across these beds, from 14 to 18 inches between the drills, dropping the seed by hand, in small furrows made by a long bitted very narrow hoe, and then covering with a rake, hauling the dirt lengthwise of the drills. In this way, they can be almost entirely wed with the hoe by standing on the alleys between the beds. In this way, my yield has been from 900 to 1,200 bushels to the acre. One thing more I will state. My best crop was planted on the 14th of June. Another thing—I plow deep. The Orange I consider the best variety.

Mr. Wm. J. Pettee of Lakeville, (Conn.) says—"My mind is—use fine, well rotted manure, and *plenty of it*—not less than 60 cart loads to the acre—spread on the manure early in the spring, and plow it under 12 inches deep, and 15th May plow again, and thoroughly pulverize the soil. Do this on the same ground just as many years in succession as you please, and you need have no fears of success in raising carrots. Indeed this course is preferable to using new land every year."

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Stump Puller.

I observed in *The Cultivator* for December, an inquiry from a subscriber at Port Hope, C. W., as to the best machine for pulling pine stumps—also how many could be pulled in a day, and what the cost when the work was done by the job. I have been in the business of pulling pine stumps seventeen years, and well understand the business. There have been five or six different kinds of machines introduced into our country; but I have found but one that has proved successful and profitable, and that is called "Stewart's Crotch and Lever Stump Machine." This is thought to be the best, by those who use stump machines.

The number of stumps that can be pulled in a day, depends entirely on the size of the stumps and the kind of land they stand in. The number that I have pulled per day varies from two to one hundred—the average probably twenty-five to thirty. I frequently pull by the day at six dollars per day, three hands, team and machine. When by the job, from fourteen cents to one dollar per stump.

I would urgently advise any one wishing to commence the stump pulling business, to procure a man well acquainted with the business, to superintend the making and ironing of the machine, making chains, spears, pike poles, &c. By so doing he will save several hundred dollars in time and expense.

This machine was patented in 1840, by F. A. Stewart of Catharine, Chemung co., N. Y. I do not know that they are kept for sale ready made; but I can furnish them complete for $175. Elijah Hoag. *Keeseville, N. Y., 2nd Mo. 19, 1854.*

Proper Time for Cutting Grass.

Mr. Luther Tucker—For more than thirty years it has been a common saying among farmers, that timothy hay should not be cut until ripe—that is, until the heads were plump and full of seed. I was raised in a country where grass was thought ready to cut as soon as it was large enough; and after I came here, I followed the same practice, although in opposition to the opinion and practice of many of my good neighbors. I followed the practice so long, and had so many opportunities to prove it, that I know to a certainty that my practice is right. For some 8 or 10 years past, I have used mostly timothy hay. Previous to that I used more clover. Very often I have not been able to get it all cut before harvest; and having several cattle and sheep yards, some one lot of cattle had to eat the ripe hay, and I am perfectly sure that it is a great loss to let timothy hay get any thing near ripe; in fact whenever it begins to come in blossom, it is time to begin cutting. If there is much to cut, and not plenty of hands, some will then get too ripe. I would prefer good wheat straw, cut before it is too ripe, to ripe timothy hay for either sheep or cattle.

A number of years ago, I built a cow house, and that season I had cut my timothy hay rather earlier than usual. I stabled my cows for the first time that year; fed them the early cut timothy hay, and took every possible care of the cattle, but they became poor, would eat but little of my green hay, and by spring the cows and young cattle were overrun with lice, and poorer by far than ever I had cattle. I concluded I had cut my timothy too green, and that my neighbors were partly right. Next season I let it get near ripe, but my cows did no better. I then concluded it must be stabling, and took out my stalls, and turned my stables into sheds. After that, my cows would get fat on green hay. After I began to fatten cattle extensively, I found out that my cow stables were not thoroughly ventilated, and this was the only reason why they did not do well in their stables.

The loss farmers sustain by letting their hay get too ripe, is immense. I would rather have four quarts of meal per day, with good green timothy hay, than to have a peck with ripe hay, to fat a steer with. Cut grass or clover green, cure in swath or cock, and it will make either sheep or steers fat in five months without grain, if they are properly attended to, but still it is more profitable to feed part grain.

I have wintered this season, about 200 sheep on wheat straw, with one bushel of oil cake meal to the 100 sheep per day, and they are now fat, although but thin when I bought them. Your truly, John Johnston. *New Geneva*, *April* 3, 1854.

We believe, with our correspondent, that the loss sustained by our farmers, by too long delay in cutting their grass, is immense. It is a subject to which we have frequently called the attention of our readers for years past. Both science and experience demonstrate that the proper time for cutting grass, is when it is in blossom. A writer on the scientific principles involved in the process of hay making, lays down the following rules:—

1. Grass must be fully developed before it is mown; if not, it will be found in its early stages to contain so much water as to be reduced, on drying, into so small a compass, that it will in quantity much disappoint the haymaker.
2. It must not be permitted to stand until its seeds are formed, much less ripe. All plants in arriving at maturity have their starch and sugar and gum in large quantities converted into woody fibre—a wise provision of Providence for enabling the stem to bear the matured seeds—and as sugar, gum and starch, are nutritive elements, it is desirable that these should be preserved, and hence the point for successful grass-cutting is that between the full development of the plant and before the formation of their seeds, in other words when they are in flower.

A government report, published in the Edinburgh Quarterly Journal of Agriculture, on the "chemical nature of grass and hay as food for cattle," says—"If, as we have endeavored to show, the sugar is an important element of the food of animals, then it should be an object with the farmer to cut grass for the purpose of hay-making, at that period when the larger amount of matter is contained in it. This is assuredly at an earlier period of its growth than when it has shot into seed; for it is then that the woody matter predominates—a substance totally insoluble in water, and therefore less calculated to serve as food to animals than substances capable of assuming a soluble condition. It ought to be the object of the farmer to preserve his hay for winter use in the condition most resembling the grass in its highest state of perfection."

We add to the above, the testimony of several careful and observing farmers, heretofore published in the Cultivator:—

C. N. Bement—Was formerly in the habit of cutting his timothy quite late, because it was easier cured after it got pretty ripe; but he ascertained, from careful experiment in using hay thus cut that it wanted substance, and that the best time for cutting was when the grass was in blossom.

Sanford Howard—The stems of grasses were filled just before the formation of the seed, with a starchy or saccharine substance. In perfecting the seed, the stems were exhausted of this substance, it being consumed in forming seed. The plant should be cut before the nutriment has passed from the stems.

W. H. Sotham—Would as soon have good bright straw for cows or sheep, as timothy hay cut after it has gone to seed. Cuts all his hay early. There was another great advantage in cutting early—the roots retained their life and strength better, and the after feed and future crops were made more abundant.

J. Pratt—Commences cutting his hay generally before any one else thinks of it, or as soon as it begins to blossom, and gets help enough to cut it all as soon as possible. He has kept a dairy of sixty cows for nine years, and attributes his success with his cows, and the fine healthy appearance of his other stock, mainly to early cut hay.

Since the above was in type, we have received an interesting paper from a correspondent at Mechanicsville, on the proper time for cutting, and the best mode of curing hay, which shall have a place soon, and for which the writer will please accept our thanks

On Cultivation for Grass.

Messrs. Editors—I have been spoken to about writing on raising grass; I am incompetent to the task. "He is considered a benefactor of mankind, that can make two spears of grass grow where but one grew before." I would that some able pen would give the public a plain practical treatise on the best cultivation, to improve our grass, as this, in many sections, is one of the most important branches of agriculture. Our country is year by year experiencing a lack in this department, and we know not how to remedy the evil.

We are decidedly a dairy county, and inferior to but one in the empire state; as Chenango and Deleware rank but little behind Orange. It has been supposed that the superior feed of Orange, is the cause of its higher standing in the butter market; but from late observation I am inclined to believe it is not wholly that. No doubt, the larger quantity from each cow is attributable to their superior feed; but something is owing to the churning all their milk, while we only churn the cream: but I leave this part of the subject, to examine how we may get more feed for our stock. More stock is generally kept than can be kept well, and our pastures are too close fed, with the exception of a few, who show it by the extra amount of butter from each cow.

To present facts for illustration, you will excuse me if I quote from my own experience, for in so doing, the credit reverts to your valuable agricultural papers, for I was rather a poor farmer, and like many men fond of doing things in my own way; but finding that the experience of others, together with my own, was a good school, I concluded it was best to try to improve in every thing—for I found, from my stinted instruction, that by sowing four quarts of herd's-grass and two of clover seed, I was constantly losing money by thin crops of grass. I began to increase the quantity, until I sow now half-a-bushel of herd's grass and three or four quarts of clover. But just the increase of seed will not do it.

I had eleven acres of new land, a little more than a middling good burn—ten acres of it was put into wheat and rye, about two-thirds wheat, and one acre left for spring wheat. I had a good man that would try to do just as I told him; I went with him and sowed one bushel; directed him to leave no spot, until all was mellowed; to go round and round every stump until it was all dragged sufficiently to cover every kernel, before he asked me to sow any more. He came in crank at night; he had finished all as I directed. The next morning we fitted another bushel, and took it out to sow; but coming on to the dragged ground, I was quite disappointed—"Why, this is not half dragged; it will not do; you must drag it as much again." 'Well if I do, we shall never get this large fallow, sowed this fall." No matter, we will do what we do well, for my motto is, "what is worth doing at all, is worth doing well," and you must not get discouraged: I will send on another team. I did so, and two teams were continued till all was sowed. The next morning, Mr. Editor, I wish you could have met me there. I have no recollection of being so well pleased with any piece of work before in my life. It did not seem possible that such a rooty, stumpy bit of ground, could have been mellowed up so much like a garden. The ten acres were all fitted in the same manner, and as much sown to wheat as could be got in, in good season, and the rest to rye. You know, and every other man ought to know, that grass must grow on this fine tilth. I got the county premium on rye at 43 bushels to the acre; on the wheat I did not, but the average on the whole 11 acres was over 30 bushels to the acre, all owing to heavy seeding and superior tillage.

And now for the grass seed; the last of March, while snow could be had to sow it even, I took 3 hogsheads of herd's grass chaff, that had been run through the mill, and some 6 or 8 bushels of clean seed taken out, and my two men, myself in the middle, and sowed the 10 acres of winter grain all over with the chaff. We then took near one and-a-fourth bushels of clover seed, and mixed with near three bushels of herd's grass and cross-sowed the whole, coming out within a few quarts, which we had left when done. The spring wheat had about the same proportion.

When harvest came, I took the surveyor to run out an acre of wheat and rye, to enter for premium—he said he never saw any thing like it before—the grass seed being sown early, the soil so pulverized and mellow, it took root immediately, and was now much of it headed out; a good swath of grass might have been mowed. My neighbors repeated that they never saw such grass grow on new land before.

I will now give a specimen on old, worn out land. I bought a farm; when the surveyor was running it out, the former owner told him, "the farm was worn out; it used to be called one of the best farms in Coventry, but it never could be brought too again." But I will tell you how I produced a wonderful change. I took my man to set him to plowing, while I held the lines to drive three horses. We went around; he could not keep the plow in over three or four inches. "What's the matter?" (A good Dutcher plow, at that time considered one of the best.) I gave him the lines and took hold of the plow, but it seemed to scrape along on a hard substance—"get on the beam, and put it in." He did so, to some eight or ten inches, and it tore up a crust as hard as a road, about three inches thick, then came a loose and open soil. I never saw any thing like it before. It had passed through a skimming system of farming, of three-inch-deep plowing. What to do, I was at a loss. I got a large log, chained one end on the whiffletrees, the other resting along the plow beam well secured, and went on to plowing. I was hooted by my neighbors, but it did not stop me. We plowed it well eight inches or more deep—put on some twenty loads of barn-yard manure to the acre, dragged it all to dust, planted with corn and potatoes, and had a very heavy crop. The next spring, put on spring wheat, and seeded with grass in the manner above described—and such grass as was never remembered to have grown on the farm before, followed. I should judge from two to three tons per acre was taken the next year's haying. This was not a solitary crop. I followed it up year after year, in this way, until now the farm is ranked among the best. I raised every year more grass seed than I wanted, and sold it from $3 to $4 per bushel, to my neighbors, when they might have raised their own for less than $2.

We will look at one other mode of cultivation and seeding. I had a 10 acre lot, too far off and up hill, to be manured without much labor. It had been a pasture field, and not so badly skimmed. I had heard much said of raising oats for a number of years in succession, by plowing in the stubble and all green substance immediately after harvest. I tried the experiment: for the first year or two, the crop was fine; it then declined. My sons remonstrated with me against adopting a new system for this field. For the rest of my fields, my determined and fixed principle was, never to put but two crops before seeding down; but I was determined to carry out this new experiment. It was continued some four or five years, and then heavily seeded: and there it remains, a mark of my folly, neither fit for meadow nor pasture.

It is evident that the generality of farmers have too much land; yet all, or nearly all, want more. I know of but few farmers but who are overstocked, or at least their pastures are kept too close fed. Mr. Julian, of Greene, though he keeps a hundred head of cattle, may be an exception; and I should like to have his mode of operation in print, as I believe he tills but very little, but manures very highly from the village, as well as husbands all his home manure.

Although I am not in favor of top-dressing, as practiced in our town, to the neglect of plowed crops, yet when I see a man manure his oat-field, I think he had better have top-dressed his meadows. But I have already exceeded the limits of a letter. One thought more and I am done.

When we see old pasture fields with a large proportion grown over with mossy knolls, or meadows, where the grass seems run out, and barren spots appear, and the general appearance of the grass is thin, who will not be reminded that they must be torn up, a crop or two succeed, and again seeded down; and who will refuse to see that heavy seeding is the best? If all can not be immediately done, manure, lime, ashes, or plaster, must be applied. G. D. Phillips. *Coventry, N. Y.*

Culture of the Ruta Baga.

Eds. Cult. and Co. Gent.—I have been a subscriber and a constant reader of *The Cultivator*, since 1838, have them all bound, making a book some two feet deep; and if I wish any information in relation to agriculture, disease of animals, or anything else of interest to the farmer, I go to that library; also if I wish to see the time and degree of the rage of any *mania*,—whether Multicaulis, Rohan Potatoe, China Tree Corn, or Poultry, so large as to be in danger of eating up the children thinking them grasshoppers, I find it all there; and I trust you will excuse me when I say that I have often threatened, but never previous to this time have written a word for the Cultivator.

I will tell you my method of raising ruta baga:—Plow sward land early in September or late in May, (late fall or early spring plowing is death to Becket lands.) If the soil is weak, cart on before plowing, twelve or fifteen loads manure; green will do, and plow in. Plow but once—that leaves the sod inverted. Spread on about May 25th, about twenty ox-cart loads of manure—if a little rotted the better—harrow thoroughly. Spread on to the acre some 100 bushels coal dust or leached ashes—if the ashes are unleached 25 bushels will do. Let them be spread just before or just after sowing. Sow the seed from first to fourth June. I sow with *Emery's seed planter*, the rows two feet apart, and then the leaves will cover the ground. Sow bountifully; then you will not have to transplant. Run cultivator between the rows, weed and thin, as soon as the leaves of the Bagas are the size of a cent, thin from six to twelve inches apart, and do all the thinning the first time of hoeing, or you will not get a crop. Cultivate and hoe as often after as the weeds show themselves.

When the crop is grown, say middle of October, turn in your calves or sheep, and let them eat off the leaves; when you wish to gather, take a sharp hoe, strike the stems and tops off; clap the hoe against the side of the baga and rack it out of the ground. Take your cart, after they have lain a few hours to dry, drive along side, pick up one in each hand, rap the two together to take off the dirt, and throw them into the cart as you would pumpkins. Be sure and watch the weather, and not let them lie in the ground after it begins to freeze; if you do they will heat in the cellar and smell bad Mine never have yet unless frost bitten.

Follow the above directions, and if as successful as myself, your bagas will cost you from four to seven cents per bushel in the cellar. If you raise turneps feed them out before February, as they grow corky. Ruta bagas will keep well till June, and are worth more than cost to feed to stock with us. There is no better root for sheep. Yours very truly, C. C. Perkins. *Becket, Berkshire Co. Mass., April* 20. 1854.

Saving of Labor in Sowing Plaster.

I sow plaster out of a wagon, and it is such an expeditious and labor saving, pain saving method, that I would urge the practice upon every farmer who has occasion to spread this very cheap and efficacious fertilizer upon his meadows, pastures or grain fields. And this is the way I do it:

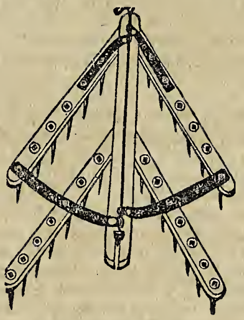
I place a quantity, say six to ten bushels of plaster in barrels or boxes in the fore part of a wagon—a one horse lumber wagon is the kind I use. Provided with a shovel and a half barrel, (a common wash tub will answer just as well,) and a boy or man to drive, we repair to the field to be dressed. The half barrel is filled and placed at the hind end, the end board removed, and seated upon a board laid across the box, with my back to the horse, I am ready to begin. The horse is started upon a moderate walk, and I distribute the plaster upon the track of my wagon for a breadth of 16 to 20 feet. A little experience will enable any one to do this perfectly. The plaster is distributed more evenly, and with half the usual fatigue. At the end of the field, your driver turns back along the side of the land previously dressed. When the half barrel is exhausted, stop and replenish. I sowed nearly half a ton on six acres of clover, last spring, in less than an hour—in less time than six men could have performed the same labor, and without inhaling half as much of the dust as any one of the six would necessarily do. I sow with either hand, as the other becomes fatigued, throwing the material high in air, and letting it fall in a cloud, rather than in lumps as happens in a greater degree where the operator is sowing from a pail. The conditions required by this method are merely a surface moderately level and smooth. Upon such ground, I should never think of sowing plaster in any other way than from a wagon.

Clover, Potatoes, &c.—The clover, in clay soils, was drawn by the frost last winter, to an extent I never before witnessed. The Canada Thistle appears to have suffered in the same way—proving the old adage, that there can be no great loss without some small gain. A very general destruction of potatoes in the hole, or heap, has taken place throughout the county. The usual amount of covering was entirely insufficient to protect them from freezing. Where the gain that attends this loss is to be found, I am not able to say—unless it be in the increased price to those who kept their potatoes in their cellars. They are very scarce, and bring six shillings a bushel by the wagon load, in our streets. In fact the supply of seed for planting must be very short. V. W. S *Syracuse.*

Harrows.

May I be allowed to ask you a question: Which is the best Harrow? its form, dimensions, &c. By answering the above in the Country Gentleman you will greatly oblige, A. M. B. *Essex, Vt.*

The Geddes harrow is undoubtedly the best one in use. The teeth being situated considerably back of the point of draught, its motion is more even and steady, and consequently easier for the team. In consequence of its wedge-form, it passes obstructions more readily. The center or draught-rod forms a set of hinges, by which it becomes adapted to uneven ground, or by which it may be easily lifted to discharge weeds, roots, or other obstructions. Or it may be doubled back and carried easily in a wagon. The accompanying figure renders its construction perfectly intelligible without further description. To prevent its rising in the middle, as it has been found to do when the draught traces are as short as easy draught requires, the chain is attached to the bar on each side, as shown in Fig. 2.



The Geddes Harrow.

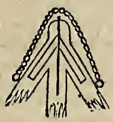
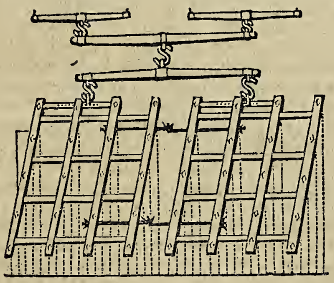


Fig. 2.

The Scotch or square harrow, when made of light timber, and numerously furnished with small teeth, is a capital implement on land free from stones for fine pulverization.



The Scotch Harrow

An improvement, at increased cost, is made in Harrow-teeth by passing the upper end of the teeth through from below, until they reach a shoulder and washer, when they are secured with a nut on the top. Harrows will run easier, if the corners, and not flat sides of the teeth, are placed foremost, so as to cut like a wedge. We do not see why cast-iron teeth for coarse harrows might not be adopted, made flat, and cutting with the sharp edge.

Bone Dust.

Messrs. Editors—I write you for information about bone-dust. In what way should it be applied to corn? Will bones that have been lying on the ground for a long time, answer? How fine should they be ground?—also the superphosphate of lime—what is its cost, how should it be applied, and where can it be got at the most reasonable rate? A Genesee Subscriber.

For the purpose of trying its specific effect, bone manure should be applied alone and well mixed with the soil; for all other purposes, it operates best by forming a constituent of compost, made of stable manure, turf, peat or loam, and a small proportion of ashes. Old bones contain the same fertilizing ingredients as fresh bones, except a part of the gelatine has disappeared. The difference is very slight. The finer they are ground the better. Unbroken bones will remain in the soil for centuries, and as a consequence they impart but little benefit to any crop; as the fineness increases, the more rapidly they act, till reduced to the nature of flour.

The super-phosphate is sold for about $45. or $50 per ton in New-York, at several establishments. It should be applied in the same way as ground bones. Our correspondent will find some further information on this subject on p. 24 current volume of the Country Gentleman, or p. 52 of the Feb. no. of the Cultivator.

Coal Tar and Paint.

Messrs. Editors—Having read in your valuable monthly paper, something in relation to the use of coal tar for the roofing of buildings, I wish to know whether this will preserve the siding of a barn as well as paint and oil; and if so, which is the cheapest in the end—or in other words, how much the cost will be per hundred square feet, and where it can be obtained. Please give me the desired information in your next number, and you will confer a great favor. A Subscriber. *Carlisle, April*, 1854.

Coal tar is an excellent preservative of wood exposed to dampness, probably quite as much so as paint, and when applied warm on a well dried surface, more so. There are two objections of considerable magnitude to its use,—one, its black and disagreeable color—and the other the large amount of solar heat absorbed by this color, producing warping and cracking. It has been proposed to lessen this evil by mixing it with whiting or yellow ochre, but we do not know the result of experience.

Coal tar is very cheap, the price varying with the demand, but not often over 2 or 3 dollars per barrel, and it may be had at any of the gas works used for lighting cities.

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Putnam Co. Ag. Society.—The annual fair of this Society for this year, is to be held at Carmel on the 26th and 27th of Sept. Their premium list, we are glad to see, embraces quite a number of agricultural works, including a goodly number of copies of the *Country Gentleman*. The officers of the society are—

President—Thomas B. Arden, Philipstown.

Vice-Presidents—Leonard D. Cliff, Carmel; Johm M. Towner, Patterson; Coleman Townsend, Kent; Thomas Drew, Southeast; Ezekiel Hyatt, Putnam Valley, and H. A. Pelton, Philipstown.

Secretary—G. Mortimer Belden, Carmel.

Treasurer—Saxton Smith, Putnam Valley.

Lightning Rods.

Our correspondent, E. L. of Greenville, Tennessee, requests information on the essential requisites of a good lightning conductor to his barn, 90 by 54 feet—a subject on which he has found conflicting theories, and contradictory information.

This subject is often unnecessarily involved in a great deal of mystery, and as a consequence many useless directions are given. We shall therefore very briefly point out what is requisite in a good conductor, that our correspondent (as well as others) may know precisely what is wanted.

1. *Sharp points at the top, to draw off the electric fluid silently.* When a rounded knob is made to approach a highly electrified body,—as every one familiar with the use of the electric machine knows,—the fluid passes to the knob in the form of an explosion, as soon as the knob approaches within a certain distance. This distance is longer as the charge is greater. But if a sharp point is made to approach the charged body, the fluid is drawn off silently in a stream, with no explosion whatever, and at a greater distance than its passage could be effected between balls or blunt surfaces. Hence the very great importance of sharp points at the upper end of the rod—drawing off the lightning from a highly charged cloud, safely and silently, while the cloud is yet at such a distance from the building as to preclude the danger of striking. Where, however, the cloud is unusually loaded with electricity, and approaches very rapidly, the point may be insufficient to drain the whole, and an explosion, producing heavy thunder, may take place. This may be prevented, at least in a great degree, by several points at the upper extremity of the rod, all of which may operate together. The same effect will be produced whether these points are within an inch of each other or a foot asunder. Some years ago, we examined a rod having but a single point, just after a terrific clap of thunder which followed instantaneously the flash, and we found that the point, which was tipped with thin silver, had been melted, iron and all, into a ball the size of a lead bullet. Portions of the building were very slightly splintered; and without the rod it would have been doubtless torn to pieces. Had there been several points, it is probable none would have been melted; and possibly the explosion might have been less severe. As it was, the largest cannon would have been a mere pop-gun to it.

It is not necessary that the point be tipped with silver, gold or platinum; if filed as sharp and bright as a needle, it will remain so many years, and never become dull enough to cause damage.

It is said that soon after the Revolutionary war broke out between England and America, and after Dr Franklin had made his electric discoveries, certain officials of the British government, unwilling to acknowledge their indebtedness to the Yankee, substituted knobs for points, which brought out the following epigram :—

While you, great George, to show affront,
Your sharp conductors change to blunt
The nation's out of joint;
Franklin a wiser course pursues,
And all your thunder fearless views,
By *keeping to the point.*

2. *A sufficient height above the roof of the building.* It is said that lightning has never been known to strike within a distance from the rod, twice as great as the height of the rod above the building. Or in other words, a rod will protect a circular space whose diameter is four times as great as the height of the point. A barn forty feet long would therefore be safe with a rod *at the middle* ten feet above it; or with a rod at *one end* twenty feet above; or with a rod at *each end*, ten feet above. A barn 90 feet long, like that of our Tennessee correspondent, would require a rod at the center, or at each end, 22 feet high above the roof. Or, a rod might be placed 22½ feet from each end, only eleven feet high, and be equally efficacious. These two rods might be connected by a horizontal one to a larger one at the center running down into the earth.

3. *A continuous connection throughout.* The best rods are welded together in one piece. But where this is inconvenient, the two parts may be screwed together with each end into one common nut; or they may be placed side by side and rivited, or screwed together. The connection is as complete, so far as thunder and lightning are concerned, by two surfaces in actual contact merely, as if welded together. The only precaution in this case being to secure the connection from any accident which might after a lapse of years produce a separation, and which would immediately make the rod worse than no rod at all, by attracting the fluid, without a provision for its escape to the earth.

4. *Entering the earth several feet at the bottom.* However perfect every part of the rod may be, it will do more harm than good, unless the fluid can pass off with perfect facility and become dissipated in the earth. Moist earth is always a pretty good conductor; dry earth is a poor conductor. It is therefore highly requisite that the rod descend deep enough to enter the permanently moist stratum, or the portion that remains moist independently of the drouth of summer. This will of course vary in different places; but as a general rule, a hole at least six feet deep should be dug for this purpose. It will greatly assist the dissipation of the fluid by placing in the bottom of the hole, in contact with the rod, at least half-a-bushel of common charcoal, which is an excellent conductor.

Some rods, perfect in other respects, become worse than useless by not sinking deep enough. Some years ago, a meeting-house was struck with lightning, although furnished with what appeared to be an excellent conductor. The building was injured, and the earth torn up around it. On examination, the lower end was found to enter the earth but a short distance, and the season being very dry, and the soil destitute of moisture, no escape was afforded for the electric fluid

5. *The size of the rod* should be sufficient to carry off any discharge without becoming heated, as would be the case if too small. Three fourths of an inch would doubtless be enough in any case whatever. The portion above the building must however be stiffer, to withstand stormy winds, especially if it rise many feet above the roof. We have found the best way by welding together three or four pieces of different sizes, placing the larger below. This gives the rod a gradual taper to the top. The larger portion should extend down far enough to admit of thorough stiffening.

6. *The proper mode of fastening to the building,* is very imperfectly understood. The electric fluid always takes the best conductor, and will not pass into wood or other imperfect conductor, so long as it can find a ready escape through metal. The discharge from a machine severe enough to knock a man senseless, may pass unfelt through a metalic rod held in the hand, provided the escape through the rod is perfect and unimpeded. So, there is no danger of the fluid passing into the building through wooden supports, so long as there is a ready communication to the moist earth below. Nothing can be more absurd than the common practice of passing the conductor through

glass rings, supported by large iron staples. For, in the first place, a *very small* discharge would leap over the glass from the rod to the staple; secondly, the glass, when wet with rain, is no insulater at all—is perfectly useless; thirdly, the staple, with its sharp points driven into the building, serves to direct the current from the rod to the building, whenever there may be an excessive discharge. No support is better than seasoned and painted wood—an incomparably poorer conductor than iron, and not presenting the slightest chance for any considerable portion of the electricity to enter the walls. An auger-hole is bored for the passage of the rod. As a matter of precaution in extreme cases, it is best to have the wooden supports project about half a foot from the walls, so as to hold the rod off at that distance. In the instance we have already related, of a rod being so heavily charged as to melt the point into a ball, not the slightest effect was visible on the wooden supports which held the rod in direct contact.

By observing the preceding directions, any farmer may employ a common blacksmith, and erect his own rod properly, without paying double price to itinerant rod-erectors, who often do not understand their business properly. Procure three-quarter inch rods; weld them or screw them together; let the part above the building be stiffer, and tapering; weld together a few smaller sharp pieces for points at the upper end, and file and polish them sharp; dig a hole six feet deep at the bottom; throw in a bushel of charcoal before filling it; secure the rod to its place by passing it through holes in wooden supports, and nail them firmly to the building, and the thing is done.

Nitrate of Soda as a Fertilizer.

In consequence of the high price of Peruvian guano, and the danger of having an inferior or adulterated article imposed upon purchasers, experiments have been extensively made to determine the manurial or fertilizing qualities of other articles. Nitrate of soda is one of these articles which have been subjects of experiment. It has been ascertained to be an excellent top-dressing for wheat, and for this purpose a much cheaper fertilizer than Peruvian guano. From the application of 100 pounds of nitrate of soda and 200 pounds of salt to an acre, there has resulted an increase in the crop of wheat to which they were applied of about six bushels. This, at the present price of wheat, would be productive of a large profit. And even at lower prices for wheat there would be a profit over the cost of the nitrate of upwards of 100 per cent. when an increase of five or six bushels to the acre was realized from its application. In Norfolk, (Eng.) where nitrate has long been applied as a top-dressing to wheat, the *average* increase is said to be five bushels per imperial acre. As such profits may lead many to make use of this fertilizer, it may be well to say that it must be bought with caution, as it is easily adulterated with common salt.

Nitrate of potash has also been tried as a fertilizer. It seems to possess fertilizing qualities equal to those of nitrate of soda, or superior as being more lasting in its effects. Those who have tried both these nitrates would prefer the nitrate of potash, if it could be had at the same, or nearly the same rate. In the London market, the nitrate of soda can be had for about £22 or $110 per ton of 2240 pounds, while the nitrate of potash or common saltpetre is put down in price currents at £33 or $165 per ton.

Sulphate of ammonia has also been tried, and found of good quality as a top-dressing.

Our brethern of Great Britain who have used the above fertilizers the most and the longest, think that they produce a better result when combined with a proportion of common salt, varying from 1 to 3 cwts. per acre. It is thought that this prevents the straw from being lodged, particularly if the season should be wet or moist.

A question having arisen as to the nitrates of soda and potash, viz: whether the acid or the alkali in these salts was the source of the fertilizing action, several experiments have been made in Great Britain in order to determine it. The experiments of Mr. Pusey, which we find in the North British Agriculturist, seem of a very decisive and instructive nature. We shall attempt therefore a brief synopsis of them, as they seem adapted to suggest new trains of thought and experiment, which may lead to improvements or economies yet undiscovered. Mr. Pusey reasoned in this way in arranging his experiments: The nitrate of soda when applied to grass produces a very vivid green and a rapid growth. Whichever, therefore of the two component parts of this substance, viz: nitric acid and soda, used side by side with itself, shall produce the same vivid green and the same rapid growth, must clearly be the astive principle of the salt.

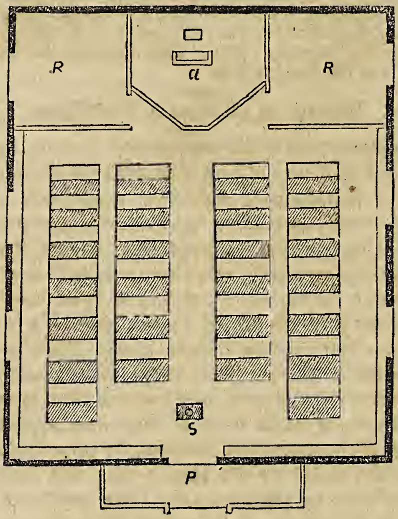
Accordingly in Sept., 1853, he commenced the experiment by trials to determine how much the nitric acid needed dilution to prevent its burning the grass. He thus found that from 2 to 8 fluid drachms of nitric acid in a pint and a half of water, produced the best effects, almost equal to the nitrate of soda, though the strongest of these mixtures scorched the leaves of the grass, but afterwards brought up a new crop of rich green leaves from the uninjured roots. He next applied nitrate of soda, 6 drachms in 3 pints of water, to an area of 5 feet square, and 4 drachms of nitric acid in 3 pints of water to another 5 feet square, and on similar patches solutions of soda, of potash, and of ammonia, in the state of pure alkalis, and found that if the effect of nitrate of soda were denoted by 10, the effect of the nitric acid was about 8, of the ammonia or hartshorn about 5, and of the soda 0. Another experiment was made the next day, in which potash was used in the place of soda, and the same, or very nearly the same, results were obtained, neither the potash nor soda in their alkaline or uncombined state having any perceptible effect on the color or growth of the grass. On the other hand, wherever the diluted acid was sprinkled, it was followed by a dark luxuriant vegetation. These experiments have rendered it certain, or highly probable, that chemical fertilizers strengthen vegetation very much according to their contents of nitrogen.

This law sheds a light over many scattered, or heretofore little connected facts. The most dissimilar substances—woolen rags, soot, sea-weed, &c., &c.,—are applied as manures, but all these refuse matters *agree* in containing nitrogen undeveloped. The nitrogen in fish, rags, &c., may assume one or other of two forms in the soil. United with hydrogen, it will form ammonia, and united with oxyen it will form nitric acid. Those experiments render it probable that an opinion advanced by Dr. Voelker, the distinguished chemist of the best agricultural school in England, may be correct, when he said that "plants in general are more dependent on nitric acid, as the source from which they derive their nitrogen, than upon ammonia." On soils containing lime, nitrogenous manures are converted into nitric acid more readily than into ammonia. *

Construction of School Houses.

Editors Country Gent.—In a poor and thinly settled district, we are anxious to build a school-house. Will you furnish us the design of a common, cheap school-house, the cost not to exceed three or four hundred dollars, and accommodating about thirty-five or forty scholars. For the internal arrangement we want the latest and most improved style. In *The Cultivator*, vol. 7, p. 396, and vol. 9, p. 75, we have designs; but the expense is beyond the ability of the district. J. B. Masten. *Rouse's Point, N. Y.*

The subject presented by the inquiry of our correspondent, is one of deep interest, and worthy of the serious attention of every citizen. Thousands of dollars—we might almost say millions—are yearly wasted in the erection of unsuitable school-houses, which most commonly answer the purpose but very imperfectly, and are not unfrequently a great waste of money by bad arrangement. State governments could not better apply a little money than by publishing a small, well prepared pamphlet on the erection, arrangement, and furnishing of the cheaper district school-houses, and sending a copy to every district.



Plan of Floor.

The internal structure of a small house is exhibited in the accompanying plan. The teacher's desk *a*, is on a raised platform; the pupil's desks are in front of this, and occupy the center of the room. The principal aisle runs through the middle, separating boys and girls; this should be four feet wide; the two smaller, on either side, need not be more than twenty inches wide. Each pupil is provided with a seat and desk, two pupils occupying side by side the same double seat—a greater number should never be placed together for several reasons, one of which is, the inner ones cannot leave their seats without disturbing their neighbors. The smaller or narrower seats and desks, for the smaller children, are placed nearest the teacher; these seats are about nine inches in width and ten and-a-half high, with desks twelve inches wide and twenty-one high. The larger seats are eleven and-a-half inches wide and fourteen inches high, with desks fifteen inches wide and twenty-seven high. Every desk should be *numbered.* The stove is placed at *S.* *R R* are the recitation rooms, one of which may be used for the smaller children, and the other for more advanced classes. If the teacher has one or more assistants, these rooms may be separately partitioned off, or the partitions may be left open next the teacher's desk, but shut off from the rest of the school, or with sliding doors, so that he may hear one of the classes from his seat. Or if only one teacher is employed, there need be no partitions, and the same places occupied by the reciting classes; or, one of these rooms may be used for a library, &c. Each room should be furnished with blackboards, and now that clocks are so cheap, no school should be without one, to be placed over the teacher's desk. Outline maps may be hung on the partitions of the recitation rooms. The entrance porch *P*, may be used for hanging up caps, &c., and it should if practicable, be large enough to contain wood. If a good well of water and pump could be added, it would be a great improvement. In some places conveniences for washing will be important.

The windows are placed on the two opposite sides—this arrangement lights a school-room to the best advantage, and prevents that confusion of light where windows are on three sides.

For children who are compelled to sit several hours during a day, (which is sufficiently irksome and unnatural, to say the best,) easy and comfortable seats should be provided. Sitting long is harder for children than for adults; but few of the latter would be willing to sit so long, even for *one* day, to say nothing of repeating it for months.

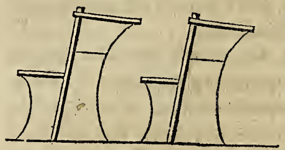


Fig. 2.

Fig. 2 represents the simplest mode of making seats and desks, yet has an important improvement, by giving a *slope* to the back of the seats. Fig. 3 represents a more finished desk, which may be adopted for larger pupils—the seats and desks being separate, there is less interference with those sitting behind. Each desk has two chairs, consisting of round plank fastened to a cast-iron support, strongly screwed to the floor. The backs are made of three slats, screwed to the seat and fastened into a cross top piece. We have already given the dimensions of these. They are becoming commonly used. The desk lids should always open above as none can be kept neat without.

A seat runs round the room on three sides next the walls, not commonly, but sometimes needed. The other seats connected with the desks, are sufficient, in the plan, for 52 pupils, and may be increased or diminished without altering the general arrangement. A house 24 by 28 feet will contain the accommodations here represented, and if built one story high with *arched ceiling*, with vertical boarding and battens, need not cost more than our correspondent's estimate. It should have something of a tasteful exterior, for to children, lessons in neatness, taste, &c., are quite as important, even in an economical and practical point of view, as chemistry and algebra. The accompanying figure represents the mode of building we have recommended, presenting a handsome exterior, and a tasteful architecture, of the simplest Italian cast. For a house built of brick, and of a more costly character, the engraving at the head of this article represents a handsome specimen, the wings serving for recitation rooms.

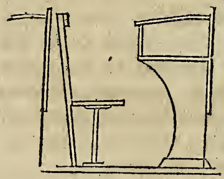


Fig. 3.

☞ The great leading and most essential requisite in a school-room, we have not mentioned. This is, *to place the seats fronting towards the north*, so that the outline maps may be suspended on the north side of the room,—and that first impressions of north and south may be correct. Unless a child sees a map for the first time placed in the right position, every thing will be turned round through all the rest of his life. The writer of this article would be willing to give two hundred dollars to-day, if he could have had his first impressions correct in this particular.

Winter Apples and Pears.

Eds. Country Gent.—In a late number of your journal, it is stated that for winter, the Rhode Island Greening and the Baldwin are unquestionably the two best market apples in America. This is probably true for the climate and soil of New England and parts of New York, but the Baldwin is not a good winter apple inthis neighborhood. We live near the Seneca Lake, which never freezes, and hence our season is about two weeks earlier than many places twenty or thirty miles distant. This is probably one reason for the failure in part, of the Baldwin, which grows very large and fair, but ripens too soon. The winds of the early autumn cause large portions of them to fall from the trees, and they soon decay. To test their keeping qualities, we have carefully picked the remainder from the trees, but have rarely succeeded in keeping any beyond the first of January. This has been our experience with the Baldwin for three years. A friend living a few miles distant says he has had a similar experience with it. My brother, who resides in Tazewel county, near the center of the State of Illinois, has discarded it, and grafted his Baldwin trees with other fruit.

The Rhode Island Greening, Esopus Spitzenburgh, Swaar, Northern Spy, Tompkins County Winter King, and Talman Sweeting, we prize the highest, out of some twenty, of the most popular kinds of winter apples which we have growing. The two first are the most greedily bought, because their good qualities are well known.

Why are not winter pears cultivated more for market? Assuredly they might be rendered very profitable. We spent several days in New-York and Albany about the first of March, without seeing a winter pear offered in market. We think that if good winter pears had then been offered in the New-York market, they could have been readily sold for one shilling each. A Flushing nurseryman told me that he had often seen the Bartlett pears sold in the fall, for ten and twelve cents each, at retail, and at six cents each by the quantity. Yours truly. S. B. Buckley. *West Dresden, N. Y., April* 19, 1854.

"Tomkins County King Apple."

Luther Tucker, Esq.—I perceive in the February number of "the Genesee Farmer," some "remarks upon the King Apple," by my friend Mr. James Mattison, in which he gives what he no doubt believed the true history of its introduction here.

Deeming it important that its correct history should be given, I send you the following account of it, which I had from Mr. James Letts, previous to his death.

It originated in Mr. Harrison's orchard, in Essex county, New Jersey, where also the celebrated Harrison cider apple originated, and was named by Mr. Letts, "*the King Apple.*"

Mr. Letts removed to Tompkins county in the year 1800. In February, 1806, he returned to New Jersey on business, when he procured some scions from his favorite tree, which was then on the decay. He brought them home, and set two of them for Mr. Jacob Wyckoff in Jacksonville, town of Ulysses, and the remainder for himself. One of those he set for Mr. Wyckoff lived; those for himself all died, leaving one graft only to fill the world with one of the most beautiful and best apples now known, for when Mr. Letts returned to New Jersey the next year, the original tree was dead, and no one had grafted from it but Mr. Letts.

The King Apple tree is a fast grower in both nursery and orchard; it makes in the orchard, a most beautiful wide-spreading top, with large dark green leaves, strong branches, rather drooping when loaded with fruit. An abundant annual bearer—requires but little pruning, hardy long lived wood.

The tree grafted by Mr. Letts for Mr. Wyckoff, is now 48 years old, and as sound and thrifty in appearance as any young tree in the country.

Fruit—rounded, sometimes a little flattened, slightly tapering towards the eye; skin smooth, covered with stripes of a rich lively red on a yellowish ground work, filled in with imperfect stripes and slashes of red, becoming almost entirely red in the sun.

It undoubtedly belongs to the family of Spitzenburghs; is a mild pleasant tart, tender, with a rich perfumed flavor. In eating from 1st of December to May. John H. Stout. *Trumansburg, March* 24.

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Cheap Grafting Wax.—A. Norton, of Sandy Hill, N. Y., states that he has found the following to be the best grafting wax he has tried. The large portion of rosin lessens its price, and at the same time renders it very adhesive, when warm, both to the hands and the stock, so much so as not perhaps to be conveniently applied in any other way than that recommended by our correspondent.

Seven pounds of rosin, two of tallow, one of beeswax, to be melted under water, and then worked and stretched under cool water, when it will be ready for direct application.

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Tompkins County King Appee.—Of this apple of which we gave a description last week, Mr. Hovy, editor of the Magazine of Horticulture, in his April number, says: "It is a very superior variety, somewhat resembling in general appearance, the Hubbardston Nonsuch, but even larger than that fine variety, and keeping till February. It is well worthy of very extensive cultivation."

Save Your Locust Trees.

Editors of the Country Gentleman—No finer tree grows than the *Yellow Locust*, formerly so abundant, now so uncommon. Scarce one stands at present, where a few years since they flourished by scores. Their rapid growth and graceful foliage made them favorites, but their mortal enemy, the *Borer*, has pretty much extirpated the old stock, while few or none continue planting. And yet they may be raised with a little attention, and I want to tell your readers, "and the rest of mankind," how.

A few years ago, a few sprouts from the roots of some old Locust stumps, sprang up around my house, and in two or three seasons, attained a height of six to ten feet. Three years ago, about the middle of May, or just as the buds began to break, I noticed one warm day, that the sap was oozing in a dozen places along the stems of my trees, and was attracting quite a number of the large fly that makes its early appearance in spring. Taking out my knife, I shaved off a thin pellicle of the bark whence the juice was issuing, and then discovered for the first time, the larvæ of the borer just commencing his operations. To dislodge a dozen from their winter quarters was but the work of a few minutes. I then examined all my trees with like results. A second examination, a few days afterwards, enabled me to *disbark* the remainder of the rascals that escaped my first observation. On a half dozen trees, but one or two finally got into the wood, and to follow them up with gimlets, nails, knives and other means of assault, was more trouble than the destruction of two or three score at the beginning of the war.

For three seasons I have protected my Locusts in this way. Not a borer is spared. I could take them out of a hundred trees in a half-day. My trees, of course, thrive beautifully. None others do in this neighborhood. My largest are four or five inches through, and 15 or 20 feet high. Any person desirous of introducing the Locust to their lawns, or about their dwellings, will, by following the directions I have indicated, be able to do so with perfect success.

I would add, while on this subject, that in watching the habits of this pest and its progenitor, the *Clytus pictus*, I discovered that it was hatched in the fall, and may be found as a very small grub, just under the bark in October, but it makes no attempt to pass into the wood until the ensuing spring, and furnishes but the slightest external signs of its presence until that period. The egg is deposited in the crevices, or when the dead bark is cracking and peeling off, and by the rough spots occasioned in trimming the young trees. They will rarely be observed above the height of six or seven feet from the ground.

Large Growth.—A sprout upon a *Pawlonia*, standing in my garden, made a growth during the season of 1853, of *sixteen feet and one inch!* The tree is four or five inches in diameter at the base, and the new growth, entirely spontaneous, and promoted neither by trimming, trenching or manuring, commenced at a point about six feet from the ground. May I not exclaim triumphantly: "*Beat this who can!*" V. W. S. *Syracuse.*

The Kitchen Garden.

CULTURE OF THE ONION.

In compliance with the request of a correspondent for accurate and reliable information on the culture of the onion, we have obtained the following statement from Amos R. Cole, of Perinton, N. Y., who has had much experience in the field culture of this crop, and who has been more successful than any other person within our knowledge :—

Dear Sir—The following are answers to your inquiries in the order in which you have made them :—

1. What is the best soil, and best manure for onions ?

Of all the different soils, I could not name the one best adapted to the culture of onions, but we have always found a light sandy loam preferable, the darker the sand the better. The manure should be fine from the stable, put on in the fall, and we use leached and unleached ashes, mixed, well harrowed in after plowing before sowing, say 8 loads per acre. The manure, unless very fine and well mixed with the soil, is often a great obstacle in hoeing. We use little or none except in the fall and exposed to the action of the frost.

2. How prepared when sown.

We plow early in the spring about seven inches deep, harrow well, then rake thoroughly, freeing the surface from weeds and lumps. Sow as early as the weather will permit, with a good hand drill.

3. Distance of rows, distance in rows of seed when thinned, how often hoed.

We prefer about 14 inches between rows. Set them in rows when thinned from 1 to 1½ inches, many prefer 1 inch. We go through the rows, when the plants first make their appearance above ground, and cutting close leave them pretty free from weeds. Then weed thoroughly, by placing a hand on either side of the row, and with the thumb and ball of finger remove the weeds gently from the side. It depends on the land as to number of times of hoeing, whether weedy or not. But in all cases they should be hoed, and if necessary, wed whenever weeds appear which would be likely to check their growth.

4. How much seed per acre, usual amount of crops ?

We usually use about 6 lbs., many say from 4 to 5 lbs., but this is rather a small amount, especially if any of it should not germinate, and very few persons after preparing theirground properly, would object to the additional quantity of seed when they consider that it is often rather uncertain, and should they sow a small amount of seed they must have a small crop. From 5 to 600 bushels is a good crop, though we have grown 368 bushels on a single half acre ; about 500 or even 450 would be a very good yield.

We have a way of testing the seed by placing about a spoonful of seed in a small vessel and pouring on boiling water, and if the seed is good it will sprout in 15 or 20 minutes. If not it is worthless. The plants will also come quicker (and in advance of the weeds,) if all the seed were soaked. They must however be thoroughly dried, or they cannot be sown by a drill.

MELONS AND CUCUMBERS.

Melons and Cucumbers require similar treatment. The best way on all heavy soils is to dig out holes about 18 or 20 inches deep and wide. Fill these holes about two-thirds their depth with fresh manure, finishing with light or sandy soil, made rich by a mixture with well rotted manure and fine garden mould. The hills should be raised about six inches above the surface, and be six feet apart. Plant the seeds on these mounds; and as soon as they are large enough to be out of the way of insects, thin out to four in a hill. Buist recommends that when the plants have made four or five rough leaves, the points of each shoot should be pinched off, as it will make them branch out and fruit earlier.

Water Melons.—The following statement of an experiment in the culture of the water melon, was furnished us for publication in the old Genesee Farmer, about twenty years since, by Dr. Stephen Mosher of Cayuga county :—

My first trial was on a new piece of sward ground which was plowed for the purpose of forming a garden. On this I had drawn three loads of fresh stable manure which was thrown into one heap, and covered with inverted sods to the thickness of six or eight inches, in the form and manner of covering a large potato hill, which was when finished perhaps four feet high, and ten feet in diameter. On four sides about half way to the top, I made four excavations through the turf and into the manure about eighteen inches in depth and diameter, partly filling the holes with fine rich earth so as to form four level hills. In each of these I planted five or six watermelon seeds of what we call the Carolina variety, at the same time that I planted about four square rods of the ground surrounding the heap, at the usual distances, with the same kind of seeds. Within three days, the seeds on the mound came up and grew most luxuriantly, while those planted in the adjacent ground, did not come up in less than fifteen days. During this time, the weather was unusually cold for the season; and though several frosts occurred yet the plants were not damaged in the least. When those on the level ground came up, pale and sickly,—each of the former had four large green leaves.

The result was, these four hills planted on the mound soon began to run, and took possession of nearly the whole four square rods, against which progress those on the ground made but a feeble resistance. And from these four hills I am sure I had a good wagon load of as fine melons as I ever saw. From one single plant alone I weighed five melons that overrun twenty pounds each, one of them weighed twenty-five pounds; and on the same vine were more than that number of smaller size. The produce of those planted round the heap was small and of little value.

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STRIPED BUGS.

Many nostrums have been recommended for the destruction of the striped bugs which often prove so injurious to melons and cucumbers. The best way to protect these and other plants requiring protection is cover a simple square wooden frame of convenient size, with cheap millinet, and then place it over the hills, pressing it into the ground so as completely to exclude winged insects and worms which crawl upon the surface. The bugs may also be effectually destroyed by the thumb and finger; going over the plants two or three times a day, if persevered in for a week or two, will effectually preserve the plants.

Transplanting Evergreens.

Messrs. Editors—Will you or some of your readers, inform me of the proper time and manner of transplanting evergreen trees, such as spruce, balsam, and others of that species—also whether apple trees that are root-grafted, are as fruitful as those of top-grafting, and the best method of treating apple trees that have too large tops and long limbs, say trees eight to ten feet in height? W. S. J. *Otego, N. Y.*

The proper time to transplant evergreens is in the spring when other trees are transplanted, but as they do not start quite so early, the operation may be deferred a little later. The practice, so often recommended, of doing it in summer, is copied from the English and Scotch mode, where their humid climate enables them to perform operations not at all suited to this country. It sometimes has happened, however, when everything has proved favorable, that summer planting has proved successful.

There is one simple rule to be observed in the removal of everrgeens, which will in all cases insure their success; and without its observance, failure will generally be the result. This is *the removal of a portion of the soil with the roots.* We have never known a white pine to live with denuded roots: and never a failure when a ball of earth was taken with them. The earth need not be frozen—it is easier to take it up if not frozen. Balsam firs, and some other evergreens of more successful removal, where grown in swamps, cannot be taken with earth; in this instance, it is absolutely necessary to preserve the roots from becoming *dry for a moment*, even the outer bark, by instant immersion in mud or wet moss.

Western cultivators have had a long controversy whether root grafted apple trees will bear as well as others—and many apparently decisive cases have been given on both sides. For trees equally thrifty, we do not believe there is any difference whatever. We have had hundreds of young root-grafted trees bear in the nursery rows, as young as those budded or "stock-grafted."

To reduce the tops of trees, cut back and thin down, by cutting off the branches where side-branches strike off, so as not to leave stumps.

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Apple Insect.

I have lost several choice young apple trees by the depredations of an uncouth white worm, much resembling the grub which infests the peach tree at the surface of the ground. It insinuates itself under the bark, a few inches from the ground, feeding ravenously upon the inner bark, leaving its excrement like discolored saw-dust in its track; and frequently, before I have been enabled to detect its presence by any change in the exterior appearance, large patches of the bark are killed, and the trees sometimes nearly girdled.

Know you anything of the villain's antipathies, habits or lineage? or have I not sufficiently indicated his "ear marks." M. L. Fitch. *Paw Paw, Mich.*

We know of no insect of the habits described by our correspondent. It cannot be the Borer, because the latter penetrates the wood. Insects usually understand botanical distinctions, and hence we should not expect the peach grub to make the blunder of mistaking an apple for a peach. There appears to be quite a similarity in the mode of operation of the peach worm and this newly discovered insect; and it is not improbably a species of *Ægeria*, distinct from the *exitiosa* or peach worm. Dr. Harris discovered another species, inhabiting the *pear* and confined to its bark, but not existing to much extent, and this may be similar in its character. All these conjectures are derived from the habits, as we are not furnished with an accurate description or with the perfect insect,—which may be obtained by placing the cocoons under a covering of gauze.

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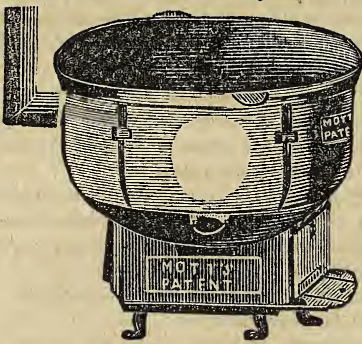
Agricultural Boilers.

I would like to know through the *Country Gentleman*, where I can obtain the best Agricultural Boiler for cooking feed for stock, with the price of one of 30 or 40 gallons. D. P. Bailey. *Fairfield, Vt.*



Probably the best is *Mott's Agricultural Furnace*, which has been extensively used for several years past. It is wholly of cast iron, the stove and boiler being connected together, and the whole being quite portable. The fire passes around the boiler, through a thin space surrounding its entire outer surface, and a very small quantity of wood will heat a large body of water, requiring not over *one-third* of the fuel needed for a kettle set in a common brick "arch." Probably these boilers may be had at most of the Agricultural warehouses, but we do not know the price.

For cooking on a large scale, a steam boiler and tight box or vat, will be most efficient and economical.

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VINEGAR FROM BEETS.

Will you or some of your correspondents give a receipt for making vinegar from the beet root, and also from the stalks of rhubarb or pie-plant. I have read and paid for the Cultivator for more than ten years excepting the last volume, and I believe that this is the first time that I have asked for information through its columns. I feel lost without the Cultivator even here among the golden hills of California, and enclose you a dollar for the last and current vols. N. E. Chaffee. *Columbia, California, March*, 1854.

The following is the mode usually practiced:—Grate the washed beets, express the roots in a cheese press, or other press of similar character, and place the liquor in a clean barrel, covering the bung-hole with gauze, and place it in the sun. In a few weeks the fermentation will have advanced sufficiently to produce good vinegar. It is said one bushel of sugar beets will make five or six gallons of vinegar, nine-tenths of the root being liquid constituent, each bushel containing about six gallons in measure besides the interstices. Doubtless the same process might be adopted for the root of the pie-plant, although it is too valuable at the east for destruction in this way.

Importation of Cattle for Livingston County.

The Evening Journal of this city, states that Messrs. BROOKS & FULLER, agents for a company of farmers in Livingston county, have purchased in England a very fine lot of Short Horn cattle, and shipped them from Liverpool in the ship Sultan early in April. The cattle are from the very finest herds in England, and will do credit to the gentlemen who have selected them, and prove of great value to the enterprising farmers of Livingston. Among them is a fine young bull and eight heifers from the herd of Mr. J. S. TANQUERAY of Hendon, Middlesex. The former is a son of the celebrated bull "Balco," bred by Mr. BATES, and now owned by Messrs. BECAR & MORRIS of New York. The heifers are choice specimens from Mr. TANQUERAY's herd, and some of them are in calf to the "Duke of Gloucester," whose portrait and pedigree were published in the *Country Gentleman* of April 27. In addition to the above were seven cows and heifers from the herd of Mr. BARNETT, Stratton Park, Berks, several of them by "Horatio," now owned by Mr. TOWNLEY of Townley Park, and a brother of the far-famed cow "Butterfly;" also one bull and three heifers from Mr. LADD's and herd at Ellington, Hunts; and one bull and heifer from the stock of Mr. CARTWRIGHT of Aynhoe.

Poisoned Animals.

MESSRS. EDITORS—Will you please inform me what to give sheep that have been poisoned by eating something. A SUBSCRIBER.

Dr. Dadd gives the following remedy for diseases of the stomach from eating poisonous plants :—

Take the animal from pasture, put it on a boiled diet of shorts, meal, linseed, and carrots. The following alterative may be mixed in the food :

Powdered marsh mallows,.	1 ounce,
Sassafras bark, ...	2 do.,
Charcoal,...................................	2 do.,
Liquorice, ...	2 do.,

giving a table-spoonful every night.

Scabs on the Eyes of Cattle.

MESSRS. EDITORS—In answer to an inquiry of James Stevenson, Esq., of St. Davids, N. B., I would say that four years ago I bought a steer from a drove, that had a spot near his eye, precisely like that Mr. Stevenson describes. I put him in the yard with my oxen and steers. In a short time the whole herd were attacked with the disease—also some calves that were kept in a yard adjoining that of the oxen and steers.

In regard to the cure, I think the simplest remedy is the best, if it answers the purpose. I took soft salt grease, and rubbed each animal with it a few times. The scurf peeled off in a short time, and the skin became smooth—the hair soon came out, and left no mark of the disease upon them. W. D. S. *Chatham 4 Corners, Col. co., N. Y.*

Cheap Drains.

MESSRS. EDITORS—In reading your paper and other works on agriculture, I often find articles on blind draining. My brother and I having made an experiment on our farm in the town of Wales, Erie Co., N. Y., I am willing to give your readers a description of our drain, and the result after a lapse of more than twelve years test, it being laid down in the years of 1839 and 1840.

Our land was a retentive subsoil, and on such soil only would I recommend this kind of drain. We dug our ditch of sufficient width at the bottom, to admit a common round shovel, and from 20 to 30 inches deep, with moderately sloping sides. Then commencing at the upper end, we laid a common hemlock, basswood or other slab, from 10 to 20 inches in width, with the sawed side downward, and the upper edge reclining against the side of the ditch so as to form a triangular throat between the slab and the side and bottom of the drain. We covered the irregular portions of the slabs with other pieces and chinked with turf. We placed the slabs end to end, the same as tile are laid, and were careful to keep the throat clear as we advanced. We formed openings from the surface wherever desirable, with open drains or dead-furrows leading to them, all of which continued to work well at the time I visited the farm in 1852.

In addition I would say that we constructed a pentstock at the barn-yard, taking the water a short distance in pipes from one of the drains. We made a sink at the lower end of the drain, and sunk it about two feet below the bottom of the drain, to hold the loose dirt that might wash through. This was cleared whenever necessary, that it might not choke the pipe. This too has more than answered our expectations, and supplied the stock with water except in very dry seasons.

I think this is the cheapest mode of draining that I have seen, and that it will be as lasting as any other blind drain. In sections of country where lumber and slabs are plenty, farmers would do well to under-drain every wet portion of their plow-land, as the expense of slabs could not exceed five cents per rod, and the first crop would nearly or quite pay the whole expense. J. WILBUR. *Bemis Heights, N. Y.*

Butter Dairy—Information Wanted.

MESSRS. EDITORS—I intend next season to commence a Butter Dairy of about fifty cows, but previously I shall be obliged to erect stables, spring and ice houses. Will you, or some of your subscribers, oblige me by informing me as to the best plan to build a stable, how large stalls; and, the barn being in a bank, if it would be better to make a manure cellar under the whole of it, with a drain in each stall. How a root cellar had best be made and how large. How a spring house should be constructed, having a good spring, and which is the best form of an ice house.

I think of coming up to your State to procure my stock of cows. In which one of the southeast Counties would I be likely to procure the best, and at what prices, and at what season. I have fed fifty-nine head of steers this winter, so presume that I could keep fifty cows.

By answering the above questions (through the Cultivator,) as to how such buildings could be the cheapest and best built, and at what cost, you would much oblige. CHESTER CO. PA.

Information is much needed on all the points named above, and we shall be greatly obliged to any of our friends who will furnish answers to any of our correspondent's inquiries.

Short-horned Bull Duke of Glo'ster.

The "Duke of Glo'ster," of which we are gratified in being able to present our readers the above beautiful portrait, was bred by the late Earl Ducie, and purchased at the great sale of his herd last year, by Col. L. G. Morris, of Fordham, N. J. Becar, of New-York, and J. S. Tanqueray, Hendon, England, for 650 guineas—about $3,250. By an arrangement among the proprietors, this bull is still in England, but will be brought to this country the ensuing autumn. The above engraving is from a drawing by H. Strafford, taken when Glo'ster was but twenty months old, in the last vol. of the Herd Book, from which we copy his pedigree.

Duke of Glo'ster, (11382) Red, calved September 14, 1850, bred by Earl Ducie, Tortworth Court, England; got by Grand Duke (10284), dam (Duchess 59th) by Second Duke of Oxford (9046), g. d. (Duchess 56th) by Second Duke of Northumberland (3646), gr. g. d. (Duchess 51st) by Cleveland Lad (3407), —— (Duchess 41st) by Belvedere (1706), —— (Duchess 32nd) by Second Hubback (1423), —— (Duchess 19th) by Second Hubback (1423), —— (Duchess 12th) by The Earl (646), —— (Duchess 4th) by Ketton 2nd (710), —— (Duchess 1st) by Comet (155), —— by Favourite (252), —— by Daisy Bull (186), —— by Favourite (252), —— by Hubback (319), —— by J. Brown's Red Bull (97).

Cures for Various Diseases.

Cure for Mange.—Take lard and sulphur—mix together, and put in lamp oil sufficient to make it pliable, more or less according to the warmth of the day. Rub the part affected with a cob, till you take off the scurf, then rub on the above with the hands. In two days go over them again, and as often after as you see signs of the disease.

Cure for Scratches.—Rub the part affected thoroughly with a cob—then take of the above mixture, and rub on thoroughly with a cob. Apply once a day until cured. If you drive in the mud, wash with soap suds before applying the above. Feed occasionally one table spoonfui of sulphur.

Cure for Lice.—Apply the above mixture at such points as the lice are most inclined to congregate; feed sulphur if convenient. You may be sure if you doctor for the mange you will kill the lice.

Cure for Warts.—If not so large as to endanger too much bleeding, pull them off, and apply the above mixture.

I had a steer that I had keeping out, which has a bunch of warts on his belly, as large as a two quart measure. I am now doctoring him, and if successful I will report. I thought at first I should lose him. Yours very truly, C. C. Perkins. *Becket, Ms.*

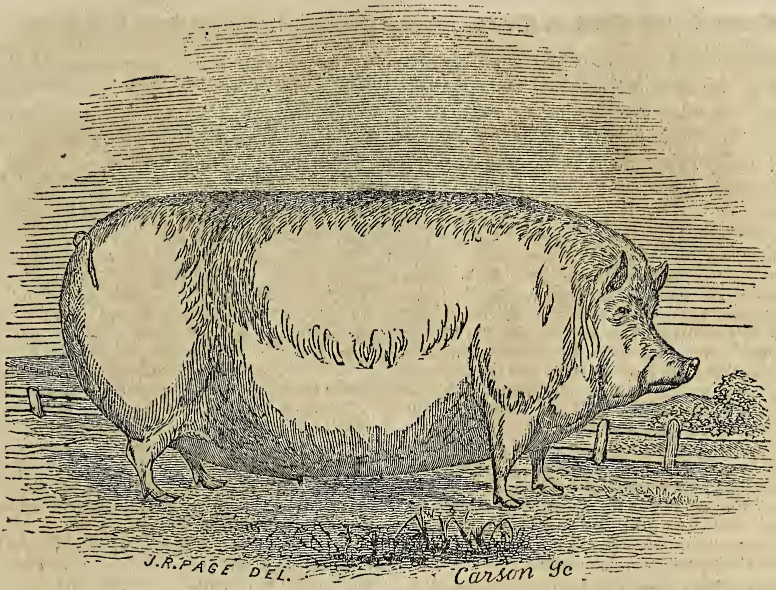
Live and Dead Weight of Cattle.

Editors Country Gent.—I fatted four beeves the past winter, and sold them to W. Webb, who keeps the market in this village, who had them butchered. I send you a statement of their weight, not because I think them extra, but to show that by weighing them alive and deducting one-third will very nearly give the weight of the quarters, tallow and hide, when dressed:

1 Cow, 11 yeers old past, 1,360—off one-third,.....	907
Quarters 715, tallow 100, hide 90,................	905
1 Steer, 3 years old past, 1,443—off one-third,.....	962
Quarters 792, tallow 86, hide 101,................	979
1 Steer, 2 years old past, 1,225—off one-third,......	817
Quarters 661, tallow 79, hide 84,.................	824
1 Steer, 2 years old past, 1,410—off one-third,......	940
Quarters 762, tallow 109, hide 89,................	960

Respectfully yours, P. Whittelsey.

Skaneateles, March 25, 1854.



Suffolk Pigs.

Messrs. Editors—As an answer to numerous inquiries, in relation to Suffolk swine, as to their shape, tendency to fatten, weight, &c., I send you a cut of a six month's pig, which I fattened last fall; also, the following account, kept with two litters of pigs, from the same sow, by Mr. David Crossman of this place:—

Pigs—Dr. to middlings,		$19 35
do corn at 62½ cents per bushel,		55 65
do apples at 12½ cts. do		3 00
do barley at 62½ cts. do		12 00
do pumpkins,		3 00
Total,		$93 00
Cr. by one pig sold at three months old,	$6 50	
do pork of ten pigs slaughtered at 8 months, 2,240 lbs, sold for $7 per hundred,	156 80	
do ten pigs sold at one month old,	20 00	
Total,	$183 30	
Balance for care,		$90 30

All the above pigs were the get of the celebrated boar "Prince." John R. Page. *Sennett, Cayuga county, N. Y.*

Importation of Sheep, Pigs, &c.

Mr. S. W. Jewett, of Middlebury, (Vt.) has recently returned from Europe, where he made large purchases of sheep, pigs, poultry, &c., a portion only of which have as yet arrived in this country. In answer to our request, Mr. J. has furnished us the following account of this importation:—

Middlebury, (Vt.) April 20, 1854.

Friend Tucker—This trip, I made some of the best selections of stock, from the best and most reliable sources in Europe.

In *Sheep*, I only made a selection of 70 bucks and ewes, and these are from the well known Merino flocks of M. M. Gilbert and Cugnot, of France. They are very large, compact, fine in form, oily in the fleece, and of fine wool. This makes 700 of French Merinos which I have selected and imported during three years, at a cost of from $66 to $400 each animal, besides the insurance.

In *Pigs*, I was fortunate in making a selection of five from the prize stock of His Royal Highness Prince Albert, called the "Windsor Breed," (Suffolk,) which are white, and of larger size, and better coated with glossy hair than the Suffolks which are in vogue here at present. Mr. Wall, of St. Germyn Street, London, butcher to his Royal Highness, dressed the prize pigs immediately after the great exhibition of Smithfield. One of them measured 12¼ inches thick on the back, 9 inches of which was solid fat. Also purchased from the prize stock of Edward Glover, Esq., near Birmingham. These are also Suffolks, very similar to the first named. Also the "improved Essex," or Lord Western breed, of black pigs. This breed took the 2d prize at the great "Metropolitan show" in December last. Many of this breed of pigs on exhibition, were blinded by a "veil" of fat cast over their eyes, an inch or more in thickness, and blocks of wood, about four inches in diameter, were constantly kept under their snouts to prevent suffocation. One shepherd remarked that he should be glad to see them off his hands, for he had watched with them by day and night for weeks.

In *Poultry*, I made selections from the most successful fanciers in England, France and Spain, 46 birds in all, 10 of which I purchased at Windsor, from the aviary of Her Majesty the Queen, consisting of Dorkings, Andalusians, Grey Cochins, and Silver Spangled Hamburghs. One variety from France are the "Normandy breed," which are noted for their fine flesh, as also great layers. They are quite similar to the speckled Dorkings. Some of my selections are from the stock of prize birds, that sold as high as 100 guineas ($500) each.

I also imported the best varieties of the *Basket Willow* from England and France. The basket willow is now extensively imported into this country for manufacturing purposes, and if not already, it is destined to be one of the most profitable products of this great country. Respectfully yours, Solo. W. Jewett.

Worms in the Head of Sheep.

In answer to several inquiries on this subject, we give the following extract from Cole's Treatise on the Diseases of Animals, which gives the best popular practice in relation to the worms in the head of sheep; although it may not be strictly correct in some of its details, it will afford our correspondents valuable information on the subject.

Cause.—A large fly, or bee, (*Oestrus ovis*,) lays its eggs in the nostrils of sheep, in August and September, and perhaps earlier and later, where they hatch, and from twenty-five to one hundred small white grubs, with black heads and a black streak on the back, may sometimes be found in the cavity between the nostrils and windpipe. They continue in this place till the next summer, when they get their growth, and are as large as a pipe-stem, and nearly an inch long, with four large teeth, as hard as bone. They then leave the sheep, and soon cast off their skin, when the bee appears, and is ready to lay a new lot of eggs. Some say that the worms do not injure fat sheep, as they find sufficient support in the nostrils; but in poor sheep, for want of food, they ascend in the head. When attacked by the fly, sheep run with their noses to the ground, and often thrust them into the loose earth to shut up the avenues of approach to the enemy.

Symptoms.—They do not generally appear till towards spring, at which time they may be discovered by a sickly countenance and loss of flesh, notwithstanding the best of keeping; sometimes running at the nose, (though not always,) and snorting, as if trying to blow something from the head. In some cases the sheep suddenly spring about in a wild, frantic manner, and drop down dead. When this symptom is exhibited, the grubs have assailed some vital part. When they do not die in this manner, they become so poor that their wool stops growing and falls off, and they give little or no milk. Sometimes they linger, pining away, and do not die till June or July.

Preventive.—Smear the noses of sheep with tar frequently, from the coming until the departure of the fly. To be sure, begin in July, and continue the use of tar till October. It may be applied directly to the noses of sheep, but the better way is to lay it in a trough or on a board, and strew salt on it, and the sheep, in eating the salt, will smirch their noses pretty well themselves. Give them salt in this way frequently, or keep a supply by them. Tar is also a specific against other diseases.

Remedy.—Take half a pound of good Scotch snuff, pour on it two quarts of boiling water, stir it and let it stand till cold; with a syringe inject about a table spoonful of this liquid and sediment up each nostril. Repeat this three or four times, at proper intervals, from the middle of October to the first of January. The grubs are then small and more easily destroyed than afterwards, and they will not have injured the sheep as they will if this operaeion be deferred till later. Half an ounce of asafœtida, pounded in a little water, and added to the snuff, will make it more effectual. There need be no alarm if the sheep be very drunk, and apparently in the agonies of death, when the operation is performed, as they will soon recover. Dry snuff may be blown up the nose with a quill, and have a good effect, but it is a slow and dirty job.

The reason for repeating the operation is, there are many cavities and folds where the grubs may not be exposed, and by repeating the application often, they may crawl out, and, by a change of situation, become exposed to the snuff. The sediment is thrown up, as it will be likely to remain longer, and prove more effectual than the liquid.

Another.—Blow tobacco-smoke well up the nostrils, by inserting the stem of a tobacco-pipe, well charged and lighted, and blow at the bowl, through a covering of cloth, for a few seconds, then in the other nostril.

Another.—Pour into each nostril of every sheep affected, a tea-spoonful each of spirits of turpentine and olive oil.

Mr. J. Brown, of Akron, Ohio, a distinguished flock-master, of much experience, says, in the "Ohio Cultivator," that the fly, which is of light drab color, deposits a *crawling maggot* at the nose of the sheep. He had taken hundreds of them, alive and active, from flies. His son had them deposited twice at his nose, while at work among the sheep. The flies work in summer, and in the fall till cool weather. The act of depositing is done very quick, and the maggot is ready to pass immediately into the head. The only chance to destroy them is during their infancy, before they pass high into the head, which is not under five or six weeks. There are two sets in a year, if not more. Matured ones have been found in the heads of lambs not more than four months old.

Remedy.—He uses tobacco-water with excellent success, commencing the last of July, and applying it till the last of October, generally three times in the season. Boil one pound of good tobacco in a gallon of water. Turn the sheep on their backs in a little trench dug in the ground, and with the head held back on the ground, inject with some force about a table-spoonful of the liquor into each nostril, pointing the syringe so that it will go into the cavities in the head, instead of falling into the throat. If at first the animals appear sick and cannot stand, they will soon get over it. Two persons will go through with several hundred in a day.

Dr. Dadd, in quoting from Gunther, describes the symptoms as, running or turning round by the sheep in eccentric circles, sometimes stopping, and then stepping forward again. The older the disease, the more the animal turns. According as the worms occupy the right or left, the sheep turns to the right or left—if on both sides, the turning takes place to the one or other alternately. When the worm is on the median line, the animal does not turn. Dr. Dadd gives the following remedy:—

Take powdered worm seed,..............	1 ounce,
sulphur,..............................	½ do
charcoal,.............................	2 do
flax-seed,............................	1 pound.

Mix them, and divide into eight parts, and feed one every morning. Make a drink from the white Indian hemp, (*Asclepias incarnata*,) one ounce of which may be infused into a quart of water, one-fourth to be given every night.

Ringworm, Scab or Itch in Cattle.

Eds. of Country Gentleman—I have wintered a yard of 50 calves, (now one year old,) and about six weeks ago they began to have the eruption about the eyes, referred to several times in the *Country Gentleman*. I made use of the application recommended in your paper—an ointment of sulphur and mercurial ointment, (*i. e. anguintum*,) with decided benefit. The scab pealed off, and the hair commenced growing again; and I doubt not I should have perfected a cure had I followed up the application as I ought. I think by making use of one or two more applications, I can entirely subdue it. It seems highly contagious with young cattle; but my cows that have been exposed have not taken it. Some of my neighboring farmers have it on their cattle. I consider it nothing more nor less than a species of itch. It does not seem to affect the general health of the animal, and I presume is easily remedied, and not alarming or fatal in its results. Wm. J. Pettee. *Lakeville, Conn., March* 25.

Answers to Inquiries.

New Apples.—(A. Norton, *Sandy Hill, N. Y.*) The Byron Whiting is a new variety which originated at Port-Byron, Cayuga Co., N. Y. It is reported to be a great and constant bearer, and a uniformly fair fruit—qualities of great and increasing importance, since, of late years, our fruit generally has become so much injured by the scab or mildew. From specimens we have examined, however, we are inclined to think it not high enough in flavor to entitle it to general cultivation.

The Melon, or Norton's Melon, is a most excellent fruit in quality, but a slow grower, and moderate bearer.

Decay of Stumps.—*S. H. W.* We cannot perceive why the height of cutting should make any difference in the period of decay, although high stumps do not usually stand so long, in consequence of the greater ease in tearing them out. Cut low, and kept covered with a heap of turf or earth, stumps will soon decay.

Wheat Drills.—*R. H. A.* The grain drill manufactured by Pierpont Seymour, of East Bloomfield, Ontario county, N. Y. is the most general favorite in this state. Bickford & Huffman, of Macedon, Wayne county, N. Y. manufacture a good and substantial drill, scarcely inferior in excellence. Our correspondent may learn further particulars by addressing them.

Wind Power.—*J. W. G.* We shall give the desired information within a few weeks, or as soon as we can procure the necessary cuts.

Hop Culture—*H. C., Sheldon, Vt.*—This subject was fully treated of in our journals for last year. You will find in *The Cultivator* for 1853, just the information you want, from one of the best hop-growers in the country.

Corn Planters.—*E. Ellis.* The best planters with which we are acquainted are *Emery's* and *Woodward's*. There may be others as good. *Emery's*, when used with horse power, will plant seven or eight acres a day, more evenly than by hand. The cost is about $15. We believe it is kept for sale at several of the agricultural stores. *Woodward's* is regarded by many as the best. It is a New Hampshire machine, and we do not know its price, and place of sale—will some of our correspondents inform us?

Dynamometers.—Will you please inform me whether or not there is an instrument or fixture for testing the draught of plows? If so, where can it be obtained, and what is the cost of it? G. T. F.

The *dynamometer*, or force-measurer, is like a large stiff spring-balance, measuring several hundred pounds, one end of which is attached to the plow, and the other to the team that draws it. The index shows with accuracy the force applied. There are several modifications. Such an instrument would be of great use to farmers in selecting plows and other implements of draught, but we do not know where it can be obtained, nor the cost.

What Crop should follow Buckwheat.—I had made preparations to plant corn, on a field that has been sowed to buckwheat for some years past, but have become somewhat fearful of so doing, owing to the remarks of a number of your correspondents touching that matter, and if corn does not succeed after buckwheat of course I dont wish to plant it. Will carrots, potatoes, or white beans succeed any better? or should the field be seeded to grass at the next sowing of buckwheat.

Carrots.—Could you inform your readers as to the best method of raising carrots, and their relative value for stock as compared with grain. Are they worth as much as oats for feeding horses?

Farmers' Clubs.—Do towns in your state generally sustain Agricultural Clubs? We have one with us, that I think of much value to its members. The members have been experimenting the past winter on feeding farm stock, the results of which, should they prove valuable and you desire it, we would communicate to you. One, as regards feeding a work horse, may be valuable. One of our committee requested to experiment, reports, that he feeds his horse twice a day a basket of cut hay, (the best,) weighing 4 lbs., and 5 lbs. of cob meal each time, making 8 lbs. of hay and 10 lbs. of the meal per day—the expense to him being $1,54 per week. His horse works all the time, and is fat. Yours, F. A. Willard. *Harvard, Mass.*

We greatly need accurate *experiments* on the rotation of crops. There are various conflicting opinions on the points inquired of by our correspondent, owing to the common way of forming opinions from single facts and from guess-work. If any of our correspondents can furnish reliable information, it would be gladly received.

A few towns only in our State maintain town agricultural societies or clubs. Where they do, they have had an excellent influence. Conversational meetings on practical subjects, among intelligent farmers, are eminently useful as well as interesting. We hope our correspondent will furnish us the results of the experiments he alludes to.

Carrots do not contain the substantial nutriment found in oats, but are most excellent as a feeding in connexion with grain, during that portion of the year when dried fodder only can be obtained. The requisites for their successful culture are simply these: Good fresh seed, a deep, fertile, *clean* soil; very early planting, to insure even vegetation; and clean cultivation from the moment the second leaf appears. A drill for sowing is indispensable to field culture.

Skunk Cabbage.—Will you have the kindness to inform me the best method of destroying the Skunk Cabbage or Skunk Weed? Some of our meadows have this weed in them, and if it can be killed by cutting, in what month should it be cut, and what time in the month, and of what depth below the surface should it be cut? By answering the above questions, you will confer a favor upon a New Subscriber. *Hartford, Conn.*

Cut with a long bladed or grub-hoe, well below the part supporting the leaves, when the plant has nearly obtained maturity. This remedy applies only to wet meadows not cultivated; when drained and subjected to tillage, this weed will of course soon be eradicated. If any of our correspondents know a better way, they will confer a favor by giving the information to our readers.

Estimating Hay in Bulk.—A correspondent in your last issue inquires the number of cubic feet of hay for a ton. If the hay be closely pressed, as at the bottom part of a bay, 450—if lightly, as on a scaffold or top part of bay, 500 ft. Wm. J. Pettee. *Lakeville, Ct.*

Bullock's Seed Planter.—I saw in a last year's number of the Cultivator, an advertisment of "Bullock's Patent Seed Planter," and you would confer a favor on me by giving your opinion as to the efficacy of the machine. L. A. J. *Litchfield Co., April* 20.

A correspondent in Ontario county, R. J. Baggerly, Esq., writes us that he ordered one of these Planters last year—that "it was thoroughly tried with corn, by several intelligent and practical farmers, and they all pronounced it a total failure."

Black Cayuga Ducks.—*E. B.*, Amenia.—These ducks are said to have descended from the wild black duck, and to have been bred distinct from any other variety for twenty years or more. We believe they can be procured of Mr. J. S. Clark, Throopsville, Cayuga co., N. Y.

A box 7 inches by 8 inches square, and 4-8 inches deep, will contain a half gallon.

Notes for the Month.

Clover for Manure.—Mr. D. D. T. Moore of Watervleit in this county, informs us that he sows clover seed with his barley crop, for fertilizing his land. Last year he turned under a clover sod—the seed sown the previous spring with barley, but not fed off after the barley was harvested—on the 8th of June, for a late crop of corn. To ascertain the weight of the crop of clover thus turned under, he cut a square foot of the sod, shook off the soil, and found the weight of the clover and its roots to be 2¼ lbs. This would give 49 tons, weighing probably about eight tons if thoroughly dried, per acre, to turn under, at an expense of only $1,50 for clover seed.

Sale of Ayrshire Cattle in New Brunswick.—We invite attention to Mr. Gray's sale of Ayrshire cattle, to be held on the 21st July next. A correspondent at St. John, whose judgment may be relied on, writes us—"You may safely recommend the sale to the attention of amateurs and breeders, as I know personally that the animals are choice specimens of the breed, and have proved themselves well suited to the climate."

French Merinoes for Ohio.—Mr. A. R. Sherman, of Washington, Ohio, who went to Europe as a delegate from the Fayette County Stock Company, has, since his return, purchased 34 French Merino sheep (three rams and thirty-one ewes) of Mr. Jewett of Middlebury, Vt. They have just been sent on to Ohio. We did not see them, but are told that they were a splendid lot of sheep.

Maple Molasses.—Our thanks are due to L. T. Sparhawk, West Randolph, Vt., for a can of very superior Maple Molasses, which has renewed the demand for "hot cakes," which have disappeared with unusual rapidity.

The Connecticut Valley Farmer.—This is a fifty cent monthly which has been published the year past at Springfield, Mass., by S. Bowles & Co. Circumstances requiring the withdrawal of its editor, Hon. W. B. Calhoun, the publishers have been fortunate in securing the services of the Rev. J. A. Nash of Amherst, as its future editor, and under whose direction the first no. of the 2d vol. has just been issued, in a style alike creditable to editor and publishers. Those who have read Mr. Nash's Letters, published in the *Country Gentleman*, will need no assurance of his ability to conduct the *Valley Farmer* with discrimination and judgment. The number before us affords abundant evidence that it will prove a safe guide to the farmer. We wish it the success we are sure it will richly deserve.

The Lawton Blackberry.—We tender our thanks to Wm. Lawton, Esq., New Rochelle, Westchester Co., N. Y., for plants of his new Blackberry, a figure and description of which was given on 59th page of current volume of the Country Gentleman.

Value of Ag. Papers.—A subscriber in Connecticut says—"I am much indebted to *The Cultivator*, for remedies which have saved me two cows, thereby saving enough to pay for it a life-time, beside the great amount of knowledge obtained from it on all other subjects."

Canada Thistles.—A correspondent in Canada says: We have found out the way to kill Canada thistles. Keep them down and give them no rest under around. Double summer fallowing has rid me of them

Samples of Wool.—We have received from J. S. Goe, of Tippecano, Fayette co. Pa., several samples of wool from imported and home-bred Merinoes, both Spanish and French. Mr. G. informs us that he has been many years employed in breeding Durham cattle and Spanish and French Merino sheep, and the beautiful specimens of wool sent us, afford good evidence of his success in wool-growing.

Transactions of the Rhode-Island Society for the Encouragement of Domestic Industry.—We have received the report of the Transactions of this Society for 1853, published in a neat form, and showing that it is in a most prosperous condition. The receipts of the society for the last year amounted to $6,427,50, and it is now possessed of property to the amount of $19,798,50—a very pretty sum for an institution of such a character. At the annual fair premiums are offered for all the domestic animals, for mechanical inventions and machinery of all kinds, for cotton and woolen goods, household manufactures in all their variety, the manufactured articles of every trade and handicraft, specimens of the fine arts, horticultural products, and a regatta closes the list. We notice that reports of the several committees are written with unusual care, and, as a whole, the Transactions are proof that Rhode Island, though a small state, is encouraging industry in no small way. The officers for 1854, are as follows:—

President—Josiah Chapin, Providence.
Vice-Presidents—John Brown Francis, Christopher Rhodes, Warwick, and Elisha R. Potter, South Kingston.
Cor. Secretary—Elisha Dyer, Jr., Providence.
Rec. Secretary—Stephen H. Smith, Smithfield.

Empiricism in Agriculture.—Extract of a letter from a subscriber in Pennsylvania—"Agricultural empiricism is fast running agricultural improvement into the ground; and unless it be boldly combatted and put to the blush, the intelligent and independent agriculturist will withdraw from all participations in shows, societies and periodicals, when he finds to what vile uses they are put. I trust the *Country Gentleman* will ever be found opposed to humbuggery—the higher the ground it takes in that respect, the more reliable will it be considered."

Superphosphate of Lime.—Extract of a letter from a subscriber at New Britain, Conn.—"I sowed peas, beets, radishes, &c., for market, before the snow storm—the first, partly with guano and partly with superphosphate, in the drill. They are all up and look well, but those sowed with phosphate came up earlier, and look decidedly the best. It is the conclusion with me, after two years' trial, that phosphate of lime will cause seeds to vegetate earlier than any thing else with which I am acquainted, and that root crops at least, are greatly benefited by its use, in the kind of soil about me—*red loam*."

Turneps Injurious to Succeeding Crops.—W. R. Fairbairn of Stevenson county, Illinois, writes us that he has been very successful in growing turneps on wheat stubble turned under after harvest; and that he has planted the land the following season to peas, beans, potatoes, corn, oats, melons and onions; but not one of these produced any thing near an average crop. The corn produced one-third less in measure than that grown on the same field where no turneps had grown. The onions after turneps, were worthless, but on land where no turneps had grown, sown the same day and from the same bag of seed, were as large as saucers. He tried this two years, and lost more than all his turneps were worth, by the deterioration of the succeeding crops.

Seedling Plum.—We are indebted to Wilson Dennis, Cedar Grove, Pa., for scions of a seedling Plum, which he thinks will prove highly valuable on account of its hardiness and productiveness.

Sowing Timothy Seed.—A correspondent says—"When is the best time to sow Timothy, is a question worthy the consideration of your correspondents."

ENTOMOLOGY.—The Legislature of this State at its late session, placed $1,000 in the hands of the New York State Ag. Society, to be expended in making an examination and description of the insects of this State, injurious to vegetation. At the last meeting of the Board, Dr. ASA FITCH of Salem, Washington Co., was appointed to carry this object into effect. A better selection could not have been made, and we learn that he is to devote his attention this season, mainly to the investigation of such inseccts as depredate upon fruit-bearing trees. His report wtll be looked for with interest, and we doubt not will prove of great economic and scientific value.

MORGAN HORSES.—The attention of breeders is invited to the advertisement of Morgan Horses in this paper. It will be seen that the services of one of this noted breed, are offered to the farmers of Saratoga the present season. "Young President" belongs to the Sherman Morgan branch, and was sired by the noted Steele Morgan, now living and active, at the age of over 30 years. This is one of the most popular branches of the family, and we doubt not "Young President" will attract the attention and secure the patronage of the lovers of fine horses in this vicinity.

THE COUNTRY GENTLEMAN.—Extract of a letter from a subscriber in New Hampshire: "I have taken more or less agricultural papers for nearly twenty years; and in all that time I have not found a paper that suits me so well as the COUNTRY GENTLEMAN. Even the Horticulturist, when edited by Mr. Downing, was not received and perused with more pleasure."

☞ The next meeting of the *American Pomological Society*, is to be held at the Hall of the Massachusetts Hort. Society in Boston commencing on Wednesday the 13th of Sept. next.

TOBACCO CULTURE.—E. H. BABCOCK & Co., booksellers, Syracuse, have just published a brief treatise on the Culture of Tobacco, adapted chiefly to the northern states, with the most approved method of managing the crop to fit it for market. Its plain directions for every process must be invaluable to the new beginner.

SALE OF SHORT HORNS IN ENGLAND.—The herd of short horned cattle belonging to Mr. Wilkinson, of Linton, took place under the auspices of Mr. Strafford, on the 13th of April, and attracted a company which has only been excelled by that in attendance at the sale of Mr. Bates' celebrated herd. Among those present were Dr. WATTS and Mr. WADDLE of Ohio, who purchased eight cows and heifers.

GREAT POTATO CROPS.—The California papers state that JOHN M. HORNER, Esq., of San Jose Valley, harvested last season, the enormous amount of *four hundred thousand bushels* of potatoes; and that his neighbor, Mr. E. L. BEARD, also raised two hundred and fifty thousand bushels potatoes, beside other immense crops.

Answers to Inquiries.

DEFECTIVE ICE HOUSE.—*A Subscriber*, New York. The communication you sent us in November last, was received and published in the Country Gentleman, and we supposed also in the Cultivator, but find it was omitted in the latter. We are inclined to think that the difficulty with your ice house is caused by the drain. In a communication from Dr. HOUGHTON of Philadelphia, published in our papers last year, he says:—"My ice kept well till the first of June, when I observed it was beginning to melt. I looked about for the cause, and observed that the workmen had dug a drain at one side of the box, from the interior, and had left it open to the air, supposing that some such drainage would be necessary. This I at once perceived, must serve as a sort of flue to carry air from the bottom of the house to the top, or the reverse, whichever way the current might happen to set, making a constant draught through the body of the house. The straw upon the top of the ice, and particularly at the sides, was, at this time, quite moist and rotting. I immediately closed the drain with sods and earth, as tightly as possible. In a few days afterwards, I found the interior of the Ice House dry and cool, and the ice free from moisture and keeping admirably."

Our correspondent is referred to the Co. Gent. p. 70, vol. II., or to the Cultivator for 1853, p. 275, for Dr. H.'s article at length. We think a ventilator should be attached, to let the warm air which accumulates under the roof, pass off.

WORMS.—Will you inform me how to destroy a small worm which I find in rich soil. It is about three-fourths of an inch long, of a dark color, and found in nests. Are they an insect that will destroy plants? What shall I do to kill them?

Please give what information you can through the columns of the *Country Gentleman*, and oblige A SUBSCRIBER. *Sheboygan Falls, Wis.*

We have occasionally met with a "worm," probably the same as described above, but do not know of any serious injury committed by it It is most frequently found on ground rather wet, and long in cultivation. Ashes and lime would probably prove best.

Can the refuse of a blacksmith's forge be used to advantage about young trees or vines? If it can, about what sorts and how applied? B. H.

The iron, ashes, &c., may be useful as special manures, and if pulverized, cinders would probably be principally valuable in heavy soils as a *loosener*. On light soils, they would not be likely to be of much benefit.

Information Wanted.

MOWER AND REAPER COMBINED.—*J. J. C.* wants a mower and reaper combined, and wishes us to tell him whose machine is the best, which we are not able to do. We should like to hear from any one whose experience would enable him to name a good combined machine for these purposes.

GARGET IN COWS.—Will some of your numerous readers give the cause, and a remedy, of what is commonly termed Garget in cows, and oblige A SUBSCRIBER.

FARM GATES.—*R. H. A.* Will some of our correspondents, skilled in gate structure, give us a description of the best and cheapest farm gate, for the benefit of our correspondent and others.

WHEAT ON WHEAT STUBBLE.—I wish to know if land composed in good part of clay, with sand and gravel, and dry,—water never standing on the surface enough to injure a crop, and which will by plowing under clover and using plaster, produce thirty bushels per acre of wheat, can be kept in sufficient order to get a crop of wheat every season, by using Guano, Lime, and Leached Ashes—i. e. by using these manures, could I stubble in a field to advantage for three or four seasons?

If I could, what would be the way of applying the manures? how much of each to the acre? J. A. C. *Oakfield, N. Y.*

We shall be glad to hear from our correspondents in answer to the above.

OREGON PEA.—Can you or some of your correspondents, tell me, what use is made of the Oregon Pea? I have received some of the seed from a gentleman in Illinois, who said they commanded a high price in their market, but what use is made of them, he did not inform me. I think them too small for culinary purposes. Any information, respecting this pea, will be thankfully received by, W.

Agricultural Societies.

NEW-YORK STATE FAIR.—We are gratified to learn that arrangements have been effected, by which the usual Cattle Show of the American Institute for this year, is to be combined with that of the State Ag. Society, which, it will be recollected, is to be held in the city of New-York. This not only does away with all rivalry between these Institutions, but will add materially to the interest of the Fair, and make it, we doubt not, the largest and most important one ever held in the union.

We hear also that the New-York Hort. Society have determined to give up their autumnal exhibition, and to render all their aid to the horticultural exhibition of the State Fair.

☞ The Connecticut State Ag. Society is to hold its first fair the coming Autumn, at New Haven, the citizens of that city having raised a subscription of $2,500, for its benefit.

VERMONT STATE FAIR.—The next Annual Fair of the Vermont State Agricultural Society is to be held at Brattleboro, on Tuesday, Wednesday and Thursday, the 12th, 13th and 14th days of September next.

Sweet Corn for Fodder.

STOWELL'S EVERGREEN, and the recently introduced OLD COLONY SWEET, are the best and by far the most productive varieties to sow broadcast or in drills, to cut for *Green Fodder;* the stalks, (nearly the whole of which are edible.) attaining a much larger growth, more profusely furnished with leaves, and being more nutritious than other sorts. May be sown as late as July with advantage.

Price, 25 cents a Quart, or $5 per Bushel.

May 25—w3tm1t J. M. THORBURN & CO.,
15 John-st., New-York.

Field Turnip and Beet Seeds.

THE following varieties of the very finest qualities and of either American or European growth; the latter being from the most reliable growers, and *warranted not to be surpassed in quality by any other importations.*

TURNIPS—	Purple top Ruta Baga, ...	.50	cents	per lb.
	Skirving's Improved, ...	.50	“	“
	do do (Am. Seed,) ..	.75	“	“
	Dale's Hybrid, ...	.75	“	“
	Yellow Aberdeen, ...	.75	“	“
	Large White Flat, ...	.50	“	“
	Large White Norfolk.	.50	“	“
	Improved White Strap Leaf, flat	75	‘	“
	Improved Red Top, flat, ...	·75	“	“
	English Rape, or Cole, ...	.25	“	quart.
BEETS—	White Silesia, or French Sugar, ..	.50	“	lb.
	Yellow German Sugar, ...	.50	“	“
	Long Red Maugel Wurtzel, ...	.50	“	“
	Yellow Globe, ...	.50	“	“

with every desirable variety of Flower, Field and Vegetable Seeds, of the most approved qualities.

To Planters or Dealers requiring Beets or Turnips in large quantities a liberal discount will be made from the above prices. J M. THORBURN & CO.,

May 25—w3tm2t 15 John st., New-York.

Thorough-bred Essex Boar, "Lord Weston" for Sale.

IS 22 months old, was got by an imported Fisher Hobbs boar; out of an Imported Sow from Lord Weston's stock; and is a superior animal. Price, $35.

Also, Young Pigs of the best Imported stock—$25 a pair, at 2 months old. Address C. S. WAINRIGHT,

May 25—w3tm1t Rhinebeck, Duchess Co., N. Y.

Young Black Hawk.

THIS celebrated horse will stand this season at the stable of I. D. REMINGTON in Sennett, three miles north of Auburn, where he can be seen at any time. He was sired by Hill's Black Hawk, Vermont dam by old Manbrino of Dutches county—gr. dam by Plato—gr. gr. dam by imported Messenger. He is a jet black, a little larger than the old horse, and is the best pattern of the old horse ever got by him. He can show as good stock as any horse in the State, and I will put his colts against any horse's colts in the Morgan family.

Terms, $20, to insure a foal—$12 for the season. Pasturing furnished and all necessary care at reasonable prices.

IRWIN D. REMINGTON, Proprietor.

Sennett, Cayuga, Co, April 27th, 1854.—w1tm1t*

English Red Durhams.

I HAVE two Short Horned Bulls of this breed for sale:—one 2, and the other 3 years old, of fine form. The Dam was from Col. Jaques' herd, Charlestown, Mass. Bull from Gen. Van Rensselaer's original stock. I have raised this stock for eighteen years. They are generally deep red, and for milking properties I have never seen their equal. Price, One Hundred Dollars each. JESSE THOMPSON.

Ballston, N. Y., June 1—1t*

Young President.

THIS celebrated MORGAN HORSE will stand this Season for the use of Mares, at the following places:

Mondays of each week, at Clifton Park Village; Tuesdays, at Burnt Hills; Wednesdays, at Jonesville; Thursdays, Mechanicsville; Fridays, at Mr. Montgomery's Stable, Stillwater; Saturdays, at Ketchum's Corners.

PEDIGREE.—This horse was sired by the *Steele Morgan*, he by the *Old Sherman*, and Sherman by the *Justin Morgan*. Dam of Young President was sired by the *Hawkins Morgan*, and he by the *Justin Morgan*.

This Horse is a beautiful dark Bay Color, weighs 1,050 pounds, and is well proportioned for bottom and speed, and moves in beautiful style; will trot a mile in less than three minutes when in proper condition. He has formerly been kept in Orange, Washington, and Caledonia Counties, Vt., where his Stock is well known, and therefore we offer the names of some of the most distinguished Horsemen in those Counties, concerning his Stock, as the following certificates will show; but in this vicinity we expect that this Horse will stand upon his own merits, and we would respectfully invite all those that are in the way of raising Stock of Improved Blood, to call and examine him for themselves before engaging their Mares elsewhere:

We, the undersigned, Inhabitants of Orange, Washington and Caledonia Counties, Vt., certify that we have been acquainted with C. M. HUCKINS' Horse and his Stock for the last five years, and believe that his Stock has proved better than that of any other Morgan Horse ever owned in this State, both for speed and durability, and that his Colts have been sold for higher prices than those of any other Horse's Colts in this State.

E. H. Craig,
Horace Mills,
John Peabody,
Robert Gray,
Charles Grow,
John Merrill,
Stephen Thomas,
S. H. Merrill,
Reuben Paige,
M. D. Blake,
Amos Garland,
Henry Oben,
J. O. Jordan,
B. C. Jones,
J. W. D. Parker,
Ellis Bliss,
Jos. W. Bliss,
Stebbin Andross,
Jesse Johnson,
J. W. Clark.

April 25, 1854.

We, the undersigned, fully concur in the above statement, and would also state that we sold a five year old Horse this Spring to Mr. Cook of N. Y. City, for Seven Hundred Dollars, and we still have a Mare, three years old in June next, that can trot a mile in three minutes, at the present time; we think her the best Mare of her age in the State. Both were Sired by Young President. Thomas Rowland,

East Corinth, Vt., April 26th, 1854. Daniel Rowland.

TERMS:—Ten Dollars for the Season. To Insure as parties can agree. All Mares disposed of before the usual time of Foaling, will be considered with Foal.

Proprietors: { C. M. HUCKINS, Topsham, Vt.
L. A. CHASE, Albany, N. Y.

FARM FOR SALE.

THE subscriber offers his Farm for sale, containing, according to deed, 131½ acres, situated in Oswego, about one and-a-half miles east of the Harbor, on the shore of Lake Ontario. It is well calculated either for Grain or Dairying, or selling of Milk, which brings from two to three cents per quart at the house, and three to five if peddled out, or for Garden Vegetables. There is a comfortable House, two Barns, with stable room for two span of horses and 20 cows, hog house, &c., and an Orchard of about 150 fruit trees. There is also a Sand-bed on the farm, for which there is a constant and increasing demand in the City, at 25 cents per load at the bed, and from 75 cts. to $1 if delivered in the City. A good team could deliver from four to five loads per day—five or six teams could find constant employment drawing sand. There is judged to be about Forty acres of Wood and Swamp, mostly black ash. Price, $8.000—terms, $3.000 down, and the remainder in payments of $500, with the interest on all sums unpaid, yearly. There is no doubt but the farm would fetch a good deal more if divided into small lots. I have been offered from $100 to $150 for the front of the farm. The Troy and Oswego Railroad will probably run within eighty or one hundred rods of the front door. For further particulars inquire of MR. SLOCUM, City Surveyor, or of the owner on the premises,

HAMILTON COVENTRY.

Oswego, N. Y., May 11—w1tm1t*

The People's Patent Office.

THIS well known establishment is still carried on under the personal superintendence of the undersigned, by whom all the necessary drawings, specifications, and documents, for Patents, Caveats, Designs, Foreign patents, &c., are prepared with the utmost fidelity and dispatch, on very moderate terms.

Persons wishing for advice relative to Patents or Inventions may at all times consult the undersigned *without charge*, either personally at his office, or by letter. To those living at a distance he would state, that all the needful steps necessary to secure a Patent, can be arranged by letter, just as well as if the party were present, and the expense of a journey be thus saved. When parties wish to be informed as to the probability of being enabled to obtains Patents, it will be necessary for them to forward by mail a rough outline sketch and description of the invention. No fee or charge is made for such examinations.

Private consultations held daily with Inventors from 9. A. M. to 5 P. M. All consultations and business strictly private and confidential.

Models from a distance may be sent by express or otherwise.

For further information apply to or address, post paid,
ALERED E. BEACH,
Editor and Proprietor of the People's Journal,
Solicitor of American and Foreign Patents.
People's Patent Office, 86 Nassau-Street, New-York.

THE PEOPLE'S JOURNAL, a record of Science, Mechanics, Invention, and Agriculture Published Monthly. Every number contains 32 pages, beautifully printed on fine paper, and *profusely illustrated with splendid engravings*, forming at the end of every year two fine volumes, comprising nearly 400 pages, with about six hundred elegant engravings. Terms only ONE DOLLAR A YEAR, sent by mail. Specimen Copies 12½ cents. Address as above.
my11—w&m3m

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by
GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Bone Dust.

BONE SAWINGS, OR MEAL, a very superior article, warranted pure. Price, $2,75 per barrel. Bone Dust, ground quite fine, $2.37 per barrel.

We are prepared to supply all orders for this very superior manure. Samples will be sent if requested.
LONGETT & GRIFFING,
Ap. 20—m3tw2m No. 25 Cliff-st., near Fulton, New-York

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price. GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Peruvian Guano.

WE are receiving our supply of Peruvian Guano per ships Blanchard, Senator and Gray Feather from the Chincha Islands, and now prepared to make contracts for the spring supply. As the demand is large we would advise all who may be in want of this valuable manure to make early application. Price, $50 per ton of 2,000 pounds. Be particular to observe that every bag is branded,

Warranted No. 1 Peruvian Guano.

Imported into the United States by F. BARREDA, BROTHERS, for the Peruvian Government.
LONGETT & GRIFFING
State Agricultural Warehouse, No. 25 Cliff-street, New-York
Oct. 20th—w&mtf.

For Sale or Lease,

5.000 ACRES OF CHOICE FARMING LANDS in Gallatin county, Illinois, in the immediate vicinity of the extensive Mining operations of the Shawnee Coal Company. A cash market for all kinds of farm products at the mines. These lands will be sold or leased to good farmers on accommodating terms.

For particulars, apply to H. H. CASEY, Sec'y,
Corner Hanover Square and Pearl street.
New-York, Feb. 1, 1854—m5t

Albany Agricultural Works,

Warehouse and Seed Store, 369 and 371 Broadway, Albany.

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"Emery's Patent Changeable Railroad Horse Powers."
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.

Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.
RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequaled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine—also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shippping or using on plantation, arm or garden. JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilisers. Jan 1, 1853—m&wtf

North River Agricultural Warehouse and Seed Store.

No. 53 Cortland-Street, New-York,

WHERE may be found a large and complete assortment of the best and latest improved Agricultural and Horticultural Implements, Field and Garden Seeds, Fruit and Ornamental Trees, Fertilizers of all kinds, &c., &c.
March 1—mtf GEO. H. BARR & Co.

Mower and Reaper.

Forbush's New Improved Combined Reaper and Mower.

THE above patent machine is now permanently established, and its entire success as a Combined Reaper and Mower proved beyond all doubt. This machine will be warranted to be made in a workmanlike manner and of the best materials, and capable of cutting from ten to fifteen acres of grass or grain per day, and in all respects to do the work as well and as easy for the horses as any other machine in the country.

Price of Combined Reaper and Mower,.......	$135
" Mower,..........................	115

For sale by LONGETT & GRIFFING,
No. 25 Cliff st., New-York.
April 6—w2ta&4tmay—m3t

Hallenbeck's Mowing Machine.

THE subscriber having perfected and tested his new and improved Mowing Machine, now offers it to the public for the coming season, confident that it will not fail to give perfect satisfaction. It is simple in construction, light of draft, and perfectly free from clogging. They are built at present for me by Deering & Dederick, corner of Bleecker and Franklin streets. Albany, N. Y. A large number will be made, and are offered to the public, warranted to operate well and to give satisfaction. Persons intending to buy mowing machines will find it to their advantage to examine mine before purchasing.

For further particulars, address the subscriber at Albany, N. Y. MARTIN HALLENBECK.
Feb. 2—w&mtf

Live Stock Agency.

IN compliance with repeated solicitation, the subscriber offers his services for the purchase of Horses, Cattle, Sheep, Swine and Poultry. His long acquaintance with different breeds and *breeders* of these animals, gives him superior facilities for procuring the best.

SANFORD HOWARD,
Office of the Boston Cultivator, Boston, Mass.
March 9—w6tm3t

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits, and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

Pigs, Fowls, Rabbits and Pigeons.

SUFFOLK AND MIDDLESEX PIGS, Fancy Fowls, Lop-eared Rabbits, and Fancy Pigeons.—The subscriber has now for sale a choice assortment of the above animals, purely bred from *imported stock*, and warranted genuine. Address GEO. P. BURNHAM,
Box 22, Post-Office, Boston, Mass.
Boston, March 9, 1854—w5tm3t

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb. 1—m1y Braintree, Mass.

Pure Bred Stock at Private Sale,

At Mount Fordham, Westchester county, New-York, Eleven Miles from City Hall, N. Y., by Harlem Railroad Cars.

HAVING met with more success than I anticipated the past year, with the Catalogue of male animals at Private sale, is the reason for offering this lot of animals, AND MY JUNE SALE BY AUCTION, WILL NOT TAKE PLACE. A full descriptive Catalogue with prices attached, will be published on the fifteenth of April, and I intend to be at home myself to see any who may call. I will sell at private sale, about 18 Short-Horns, 6 of which are young Bulls and Bull Calves. The Cows and Heifers old enough will be in Calf to the Celebrated Imported Bull "BALCO," (9918.) or Imported "ROMEO," winner of the first Prize at Saratoga, in 1853; and also at American Institute the same year.

The young Bulls and Bull Calves, are some of them from imported Cows, and sired in England; the others are sired by the Imported Marquis of Carrabas, (11789.) winner of the first Prize at Saratoga, the past year, as a two year old.

Also, about 10 head of Devons, consisting of a yearling Bull, sired by MAJOR, and 5 Bull Calves, sired by my imported first Prize Bull, FRANK QUARTLY, and several of them from imported Cows. The Cows and Heifers old enough, will be in Calf to FRANK QUARTLY. Also 6 or 8 Suffolk Sows; and several young Suffolk and Essex Boars. Also, 2 Southdown Rams, Imported direct from Jonas Webb; and 6 Yearling Rams, all bred by me, from Stock on both sides, imported from Jonas Webb. Catalogues will be forwarded by Mail if desired.

All Animals delivered on SHIP-BOARD, or RAIL CAR in the City of New-York, free of expense to the purchaser. The Devons are at my Herdsdale Farm, 12 miles north, to which place I will take persons both to and from.

MY FRIEND MR. N. J. BECAR, who is interested in several of my Importations, will also sell about 10 head of Short-Horns, consisting of 4 young Bulls, and 5 or 6 Females. His young Bulls are also several of them from imported Cows, and sired by the LORD OF ERYHOLMNE, (12205,) and the celebrated first Prize Imported Bull ROMEO. Mr. Becar's Cows and Heifers are in Calf to the imported Bull, MARQUIS OF CARRABAS, (11789.) Mr. Becar can be seen at his Store, No. 187 Broadway, New-York, at which place he will make arrangements to go to his Farm, at Smithtown, Long Island. His Animals will be entered in the same Catalogue with mine, which can be obtained by addressing him at his Store, or me at Mount Fordham. His animals will be delivered in the same manner as mine. Our Importations have been in almost all cases made at the same time, and are of equal merit, excepting that I have more in number. ☞ Terms, cash on delivery. L. G. MORRIS.
March 30, 1854—w&m2m

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.
March 1—mtf GEO. H. BARR & Co.

Eggs for Sale.

I WILL SPARE A FEW SETTINGS OF EGGS from my choice stock of Buff White and Gray Shanghai fowls—also from my Bolton Gray and Dorkings.

S. V. C. VAN RENSSELAER,
April 27—w2t* Claverack, Col Co., N. Y.

Fowls and Eggs for Sale,

OF Brahma Pootra, Chittagong, White Shanghai, and Buff Shanghai varieties, choice, and of pure blood. Eggs for setting, by the subscriber.

FRANCIS W. COWLES.
Farmington, Ct., March 8, 1854.—Mar. 30—w1tm2t

Imported Horse Consternation.

THIS well known, thorough bred horse will stand the present season, as heretofore, at the farm of the subscriber, one mile west of Syracuse. For full pedigree, see Derby and Miller's edition of Youatt. *Terms*, $10 the season; $15 to insure, payable in advance in all cases. Good pasturage furnished at 50 cents per week. Mares at risk of owners in all respects. No mare will be served that is either ringboned, spavined or blind. J. B. BURNET.
Syracuse, May 1, 1854—w2m—m3t

The Original Black Hawk

WILL be kept the coming season at his old stand, the stable of DAVID HILL, in Bridport, Vermont. His services will be limited to fifty mares Terms $50 the season.

Those wishing his services should send their names early, as those sending first will be first served.

DAVID HILL, Agent.
Bridport, Vt., April 1—m2t*

Black Hawk Horse Raven.

THIS horse, one of the most distinguished of the Black Hawk family, will stand at the stables of the subscriber the coming season. Terms, twelve dollars the season—Insurance by agreement. Good pasturage afforded at a reasonable price. Accidents at the risk of the owners, though great care will be used to prevent their occurrence.

The subscriber pays much attention to the breeding of fine animals. He is the owner of the beautiful horse Falcon, the thorough bred mare Latona (purchased of the late Mr. Gibbons,) and others. The celebrated horses Vermonter, at Burlington, Iowa, and Champlain at Hartford, Trumbull county, Ohio, were bred by him. He has for sale a very valuable Black Hawk mare, four years old in June next.

ROBBINS BATTELL.
Norfolk, Conn., March 30, 1854. ap6w1tm2t

Genuine Superphosphate of Lime.

THE subscriber has now on hand and is constantly manufacturing, at his works in Middletown, Conn., *Superphosphate of Lime*, which he warrants free from any adulteration, and equal, if not superior, to any in the market. It is made of *bones* prepared in the most approved manner, put up in substantial bags for transportation, and is furnished promptly to order or at the works.

He also manufactures, and has constantly on hand for the market, *Bone Dust* of a superior quality.

These fertilizers have been thoroughly tested by careful and experienced agriculturists in this vicinity, and have given general satisfaction. ANDREW COE,
April 1—m3t Middletown, Conn.

Ground Bone.

THE subscribers are now prepared to furnish Bone Dust by the barrel or ton in its pure and most efficient state, ground to any desired fineness. GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

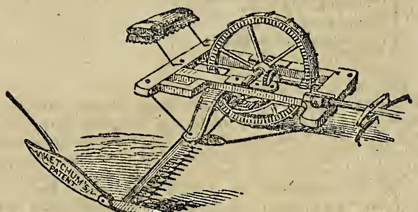
GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

Cider Mill and Press.

HICKOK'S CIDER MILL AND PRESS.—This mill and press is conceded, by all who have seen and used it, to be the best—simple in construction, portable, weighing 275 lbs., and not liable to get out of order. Warranted to work well, and give satisfaction. The first premiums of the American Institute and Crystal Palace have been awarded to this machine. Price, $40. Drawings and descriptions will be sent by addressing the sole agents,

LONGETT & GRIFFING,
25 Cliff-street, New-York.

May 1—m5t—w2tinM,Ju,J,A,&4tinS



Ketchum's Improved Mowing Machine,

WITH ENTIRE CHANGE OF GEAR,

The only Successful Mower now known.

KETCHUM'S IMPROVED MACHINE, which we are building for the harvest of '54, was thoroughly tested last season, and the advantages gained by our change of Gear are in all respects as we designed, viz: *durability, convenience and ease of action.* The shafts now have bearings at both ends, which overcomes all cramping and cutting away of boxing. A counter balance is attached to the crank shaft, which gives it a steady and uniform motion. Each Machine can be thrown out of gear; there is great convenience in getting at each and every nut, all of them being *on upper side of the frame;* oil cups are attached to all the bearings, which, by the use of a wad of cotton, will hold oil for a long time, as well as protect the bearings from dust, grit, &c.; the finger bar is lined with iron its full width, which protects it from wear.

These and various other additions for strength, durability, &c., makes it the most simple and perfect agricultural implement in use. They weigh about 750 lbs. each, and can easily be carried in a one-horse wagon.

It requires not over ten minutes to get one ready for operation, there being but two bolts, (besides the pole bolts,) to be secured, to have one ready for use. They will cut all kinds of grass, and operate well on uneven or rolling lands, or where there are dead furrows. This Machine took the highest award, with *special approbation*, at the World's Fair; it also received, during last season, one silver and four gold medals, and various other flattering and substantial testimonials of approval. We have spared neither pains nor money to make this Machine deserving of public favor, and hope to be able the coming season to supply the great and increasing demand.

We take this occasion to caution farmers against buying *untried* Mowers, if they do (as was the case with many last year) they incur loss, vexation and disappointment.

If any parts are wanted to repair any Machine we have sold, or may hereafter sell, they will be furnished and only manufacturer's cost for the same be charged.

☞ In all cases where extras are wanted, be sure to give us the *number of your Machine.*

Warranty:—That said Machines are capable of cutting and spreading, with one span of horses and driver, from ten to fifteen acres per day of *any kind of grass*, and do it as well as is done with a scythe by the best of mowers.

The price of the Mower, with two sets of knives and extras, is $110 cash, in Buffalo, delivered on board of boat or cars free of charge.

Office and Shop, corner of Chicago-street and Hamburgh canal, near the Eastern R. R. Depot, Buffalo, N. Y.

HOWARD & CO., Manufacturers and Proprietors.

The Mower is also manufactured by RUGGLES, NOURSE, MASON & Co., at Worcester, Mass., for the New England States.

By SEYMOUR, MORGAN & Co., Brockport, N. Y., for Illinois, Iowa and Michigan.

By WARDER & BROKAW, Springfield, O., for Ohio and Kentucky. March 16—w2m, m3t

All orders addressed to THOMAS HULL, Albany, *General Agent* for said machine, or left with J. & G. M. SAYLES, No. 62 Quay-street, Albany, will be promptly met.

Ketchum's Mowers,

WITH the new improvements, for sale by

LONGETT & GRIFFING,

May 1—m&w 2ms No. 25 Cliff-street, New-York.

Albany Tile Works,

Corner of Patroon and Knox-Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices suitable for land drainage, always on hand in large or small quantities of the first quality, delivered at the docks and railroad depots free of cartage:

Horse-Shoe Tile.

4½	inch caliber,	$18 per 1000 feet.
3½	do	15 do
2½	do	12 do

Sole Tile or Pipe.

3	inch caliber,	$18 per 1000 feet.
2	do	12 do

Large Tile for drains about dwellings, yards, &c., of various sizes, $4 and $8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains at $4 per 100 feet. Drain your land and save your crops. Orders from a distance will receive prompt attention.

A. S. BABCOCK.

Albany, April 20, 1854—w&m6m

Appleton & Alderson's Drain Tile Works,

Corner of Lydius and Snipe streets, Albany, near Mr. Wilson's Nursery.

THE subscribers are prepared to furnish Drain Tile of the various and most approved Patterns, at from $12 to $18 per 1000 pieces. The Tile are more than 14 inches in length and a larger calibre than any of American manufacture for the same prices. We warrant every Tile to be perfectly sound, to fit good at the joints so as to admit water and keep out the dirt, and to drain Land from 12 to 20 feet on each side of the drain, according to the nature of the soil.

Also, large Tile for small brooks and drains about dwellings, &c. at from $4 to $8 per 100 pieces.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at Messrs. L. & W. MERCHANT'S, 71 Quay-st.

Full directions for laying Tile will be sent free to those addressing the subscribers. Orders are respectfully solicited.

Address, APPLETON & ALDERSON,
April 13—weow&mtf 195 Washington-st, Albany, N. Y.

Langstroth's Movable Comb Bee Hive.

PATENTED Oct. 5th, 1852.—Each Comb in the Hive is attached to a separate movable frame, and in less than five minutes they may be all taken out, without cutting or injuring them, or at all enraging the bees. Weak stocks may be quickly strengthened by helping them to honey and maturing brood from stronger ones.

Queenless colonies may be rescued from certain ruin by supplying them with the means of obtaining another queen; and the ravages of the moth effectually prevented, as at any time the hive may be readily examined, and all worms, &c., removed from the combs. New colonies may be formed in less time than is usually required to hive a natural swarm, or the hive may be used as a non-swarmer, or managed on the common swarming plan.

The surplus honey may be taken from the interior of the hive on the frames or in upper boxes or glasses in the most convenient, beautiful and saleable forms. Colonies may be safely transferred from any other hive to this, at any season of the year, from April to October, as the brood, combs, honey and all the contents of the hive are transferred with them, and securely fastened in the frames.

We are now prepared to sell state, town, county and individual rights, to make, vend and use these hives on reasonable terms. The price for individual rights, which will entitle the purchaser to make the hive for his own use, is five dollars. We can also furnish hives to all who wish. Price from two to five dollars. Upon the receipt of nine dollars we will send the right, together with a beautiful hive, with glass on four sides, showing all the combs. For ten dollars the right and a well made hive which will accommodate two swarms with glass on the back side only. For seven dollars the right and a well made hive without glass, which any one can make who can use the simplest tools.

Agents wanted for the sale of the above rights. To those who can furnish good testimonials of character, qualifications and responsibility, a liberal commission will be paid.

All communications addressed to J. BEALS, *Greenfield, Mass.*, will meet with prompt attention.

For one dollar, postage paid, Langstroth's book entitled the Hive and Honey Bee, will be sent free by mail.

J. BEALS,
April 13—w4tm2t Att'y for Rev. L. L Langstroth.

Contents of this Number.

Foreign Correspondence, by S. W. Johnson, ... 169
Profits of Accurate Farming, ... 171
How to Build a Good Fence, by T. Simpson—Water in Lead Pipes, by A. D. Arms, ... 172
Farming in Tennessee—Reduction of Bones by Ashes, by J. A. Nash, ... 173
Cement Pipes for Water, by W. P.—Plowing in Green Crops, by E Hoag—Influence of Agricult. Papers.. 174
Stick to the Farm, by Henry F. French, ... 175
Home Manufacture of Poudrette, ... 176
Culture of the Carrot—Stump Puller, by E. Hoag, ... 177
Proper Time for Cutting Grass, ... 178
On Cultivation for Grass, by G. D. Phillips, ... 179
Culture of the Ruta Baga, by C. C. Perkins—Saving of Labor in Sowing Plaster, by V. W. S., ... 180
Harrows—Bone Dust—Coal Tar and Paint, ... 181
Lightning Rods, ... 182
Nitrate of Soda as a Fertilizer, ... 183
Construction of School Houses, ... 184
Winter Apples and Pears, by S. B. Buckley, ... 185
Tompkins County King Apple, by John H. Stout—Save your Locust Trees, by V. W. S., ... 186
Culture of the Onion—Melons and Cucumbers—Striped Bugs. 187
Transplanting Evergreens—Apple Insect—Agricultural Boilers—Vinegar from Beets, ... 188
Importation of Cattle for Livingston Co.—Poisoned Animals—Scabs on the Eyes of Cattle, by W. D. S.—Cheap Drains, by J. Wilbur—Butter Dairy........ 189
Short-horned Bull Duke of Glo'ster—Cures for Various Diseases, by C. C. Perkins—Weight of Cattle, 190
Suffolk Pigs, by J. R. Page—Importation of Sheep, &c. 191
Worms in the Head of Sheep—Ringworm, Scab, or Itch in Cattle, by Wm. J. Pettee, ... 192
Answers to Inquiries, ... 193 195
Notes for the Month, ... 194
Information Wanted. 195
Agricultural Societies, ... 195

ILLUSTRATIONS.

Harrows, ... 181
Plans of School Houses, ... 184 185
Mott's Agricultural Furnace, ... 188
Short-horned Bull Duke of Glo'ster 190
Suffolk Pig, ... 191

Harvest Implements.

KETCHUM'S Mowing Machine. Hussey's Reaper and Mower combined, and those of other inventors, with all the latest improvements. Scythes, Snaths. Sickles, Horse, Hay and Hand-Rakes; Grindstones hung on friction rollers, etc.

Improved Threshing-Machines and Horse-powers, of all the best kinds. R. L. ALLEN,
189 and 191 Water street, New-York.
May 18—weow3t—m1t

Agricultural Machines.

KETCHUM'S Mowing Machines.
Wagner's Patent Clover Header.
Emery's Patent Railroad Horse Power,
And a full assortment of AGRICULTURAL IMPLEMENTS, for sale at the *Albany Agricultural Warehouse and Seed Store*, 369 and 371 Broadway.
RICH'D H. PEASE,
April 27—w4tm1t *Successor to Emery & Co.*

To Farmers.

TO start Corn, and make it ear well, and mature early, this late, cold season, there is nothing equal to Peruvian Guano. Superphosphate of Lime and Poudrette are also good. For sale at the Agricultural Warehouse and Seed Store of R. L. ALLEN,
189 and 191 Water street, New-York.
May 18—weow3t—m1t

J. & C. HOWARD,

MANUFACTURERS OF

CHURCH AND FANCY VANES,

West-Bridgewater, Mass.

A great variety of patterns manufactured, such as Horses, Oxen, Roosters, Plows, Cows, &c.
May 18—w4tm2t

Cultivation of Tobacco.

A PRACTICAL TREATISE on growing Tobacco in the Northern States, just published. Price, $25 cts.
E. H. BABCOCK & CO.,
May 4—m3t Syracuse, N. Y.

Great Sale of Ayrshire Cattle.

MR. ROBERT GRAY, *Oak-Park, Fredericton New-Brunswick*, will sell at auction on Friday, 21st July. 1854, at 11 o'clock forenoon, at his farm, his surplus stock of pure bred Ayrshire cattle, consisting of—

1 Two year old bull,
1 Three year old bull,
10 Heifer and bull calves,
6 Yearling heifers,
4 Two year old heifers,
12 Cows of various ages.

Mr. Gray came to this country from Ayrshire, five years ago, with a selected stock of choice Aryshire cattle, from which the above have been bred. They will be found equal to anything that could be imported, and have the advantage of being acclimated. The bulls and young stock are descended from the celebrated bull "Jock the Laird," for which three hundred guineas were paid. All are warranted pure.

A proportion of each lot will be sold without reserve, and the whole if there is sufficient competition.

Catalogues with full pedigrees will be furnished previous to the sale.

April 27—w,nos.69,70,78,79,80,81—m2t

Thrashing Machines,

With late improvements, Circular and Cross-cut Wood Saws, Clover Hullers and Cleaners, &c., are made at Central Bridge, Schoharie county, New-York, by G. WESTINGHOUSE & CO.

OUR RAILROAD HORSE POWER AND OVERshot Thrasher have obtained the reputation of being the best machine for thrashing in use, where they have been compared with others. We have made such improvements in the THRASHER as to entirely prevent the dust and grain from flying into the feeder's face when feeding the machine. The RIDDLE has also been improved by attaching a straw shaker to it, which is simple in construction and efficient in its operation, making it one of the most perfect separators of the kind known.

Our SEPARATOR (a combined thrasher and cleaner,) has the distinguished reputation of being a superior machine.

Our WOOD SAWS are made in the most convenient form for sawing wood.

Our CLOVER MACHINE hulls and separates the seed from the chaff at the same time.

These machines are all warranted to work to the satisfaction of the purchaser, or they oan be returned and the purchase money refunded. Our prices will be for 1854, as follows:—

For two horse power Thrasher and Riddle, straps, &c.,	$155
one horse do. do.,	130
two horse power,	112
one horse do.	90
Separator for two horse power,	115
large Separator,	135
Thrasher and Riddle,	43
Circular saw,	42
Cross-cut saw,	25
Clover machine,	80

Any further information in relation to these machines can be obtained by addressing the subscribers at Central Bridge, Schoharie county, N. Y. G. WESTINGHOUSE & CO.
April 20, 1854—w4tm2t

THE CULTIVATOR:

A MONTHLY JOURNAL OF

Agriculture, Horticulture, and Domestic Economy.

THE PRICE REDUCED TO 50 CENTS A YEAR.

All subscriptions must commence with the January No and the payments must in all cases accompany the order for the paper.
LUTHER TUCKER,
Publisher, Albany, N. Y.

Single copies, Fifty Cents—Eight copies $3—any larger number at the same rate.

Postmasters and all friends of agricultural improvement, are respectfully invited to act as agents for The Cultivator and The Country Gentleman.

THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

VOL. II. ALBANY, JULY, 1854. No. VII.

What Time shall we Cut Timber?

Never in winter, but always in summer. It should be cut during the most rapid season of growth, and while that season is drawing towards a close. The same rule should be followed that skilful nurserymen observe in performing the operation of budding—that is, just as the *terminal bud* on each branch *begins* to form—as soon as it is first evident that the growth of the branch is about to terminate, but is *still in active progress.* Experienced tree-propagators have found that much earlier than this, the juices of the tree are in too thin or liquid a state to form a good adhesion between the bud and the peeled surface. From the moment that the bark separates freely from the wood, these juices continue to thicken, until growth ceases altogether and the new wood is completely formed; and when this new wood is in the state of a thick paste or cement, then is the time that the bud will adhere most perfectly. This is the period when the bark may be peeled from a tree without destroying its vitality. And this is the time for cutting timber. Early in spring, the tree is full of sap, which is little else than pure water, and which has been gradually accumulating through winter by the absorption of the roots, with no outlet for its escape, as there is in summer through myriads of leaves. While the tree is thus replete with water, it is in the worst condition to be cut. But towards midsummer, when a portion of this water has passed off through the leaves, and the rest has been much thickened by conversion into material for wood, the case is very different; for while the watery sap promotes only decay, the thickened juices soon dry and harden, and assist in the preservation of the wood.

We have recently been furnished with a number of facts, in corroboration of this opinion, by ISAAC HATHAWAY, of Farmington, Ontario county, N. Y., an old and enterprising settler, a close and extensive observer, and who has had much experience in connexion with saw-mills and timber erections. All his observations tend to show the great difference between winter and summer cut timber, and induce him to think that, cut at the best period, it will last under the average of circumstances three times as long as when felled in winter. In one instance, a fence, consisting of winter-cut materials, a part split into rails, and a portion in round poles, of beech, maple, iron-wood, bass-wood, &c., had completely decayed in fifteen years, and none of it was even fit for fire-wood. In another case, a quantity of bass-wood rails were cut in summer, and split from the brown or heart portion of the tree. This was done about fifty years ago; thirty years afterwards the fence was quite sound, and even now some of the same rails remain undecayed, although much worn away by the weather. Winter saw-logs, left over one summer at the mill, are usually much decayed for several inches towards the interior; summer-cut logs, which have lain a like period, are always sound. He has cut hickory for axe-helves; if done in winter, decay soon commences, and the worm which loves this wood, often wholly destroys its value. Summer-cut, he has never known it to be attacked by the insect, and indeed it seems too hard for them to penetrate. He has had occasion to examine several old frames of buildings, and in every instance where the period of cutting could be determined, the same striking difference in durability was conspicuous.

He related several experiments on the durability of posts, one of which is worthy of repetition. In a gravelly soil, where the water never remains, a stone bottom a few inches thick was laid in the post-hole, on which the post was set, and was then surrounded with stone closely rammed in on every side. As a consequence, the water never remains long enough in contact with the post to soak its interior, as would be the case if damp earth passed its outer surface. Such posts consequently give promise of remaining sound, after some years trial, at least twice the period of those simply packed in earth. He also finds that posts of what is termed the white cedar in western New-York, (the American arbor-vitæ) last much longer when set green with the bark on, than if sawed and seasoned, which he attributes to the protection afforded by the durable bark, against the vicissitudes of rain and drouth, and the air and weather generally.*

Now that the season is approaching, best adapted for timber-cutting, as indicated in the preceding remarks, we hope those interested will at least satisfy themselves on the subject by a fair and careful trial.

---

* In ordinary instances, however, above ground, the bark by preventing seasoning, only accelerates decay.

The Laws of Alimentation,

AS APPLICABLE TO SHEEP HUSBANDRY.

"It costs no more to produce fine than coarse wool."—J. Van Buren, *Clarksville, Ga.*

"By an irrepealable law of nature, small sheep consume no more food, according to their weight, than the larger breed."—J. W. Colburne, *Springfield, Vt.*

"A few facts in Wool-Growing are conclusively settled, viz:—All animals require food according to their live weight, and a like quantity of food will produce an equal quantity of clean wool upon all sheep raised for the value of their fleece." —Joseph Parker, *West Rupert, Vt.*

"The expense of keeping large and small sheep is in proportion to their weight."—T. Wendell, *Farmington, Ct.*

"Sheep at maturity require food according to their weight; and, other things being equal, we may expect about an equal return, whether the animal be large or small."—George Campbell, *West Westminster, Vt.*

"By a universal law, the larger animal, of the same species, consumes a proportionably larger amount of food."—H. S. Randall, *Cortlandville, N. Y.*

"It takes an equal amount of food to produce a pound of flesh or wool, without regard to the size of the sheep, and the same food that will produce a pound of coarse wool, will produce a pound of fine."—H. C. W., *Co. Gent. of April* 20.

This somewhat formidable array of quotations, if it does not prove what is asserted, does at least prove that the opinion is common—

First—That the size of a sheep is the measure of the food it requires; and

Secondly—That the food consumed by a sheep, is a measure of the flesh, fat, or wool produced.

If these propositions are true of sheep, they are equally so of other animals, and the subject is of the greatest importance to every farmer. If true, the business of stock breeding is certainly much simplified. The selection of stock needs no skill, if the income from it is a matter of fore-ordination, which no stupidity can diminish, nor the greatest skill, intelligence, or taste, increase. If the income from animals is thus fixed, there can be no hope of change for the better. Agricultural progress is impossible, fogyism is wisdom, and improvement a humbug.

The gentlemen whose names have been quoted, must not infer a want of respect, but give me credit for honesty, when I express the full conviction, that these two propositions contain as much and as dangerous error as can be expressed in so few words.

It is proposed to show the fallacy of these two propositions, in their order.

First—The food which a sheep requires is not in proportion to its size.

The amount of food which a sheep requires, is affected,

1. *By respiration.*

In breathing the sheep receives oxygen and gives out carbon. Of all the food of the sheep, one-half is carbon; and of this, more than one-half is consumed in the fire of respiration. Thus more than one-fourth of all the food is used to keep the machine in motion. The quantity of food so used, depends not on the size of the animal, but on the amount of respiration; and this is affected by the degree of perfection in the lungs and by external causes, as exercise. In violent labor more food is required, because more is consumed in breathing. Respiration is affected by climate. In cold weather, more oxygen is inhaled and more carbon expired; so in hot climates, less food is used; while in the cold regions of the poles, the quantity consumed is enormous. We have here one-fourth of the food consumed in a manner not necessarily connected with the size of the animal.

2. The amount of food required, is affected by the *absolute waste.*

A portion of the food of animals, greater or less in different individuals, does not enter into the circulation at all, but passes away undigested, from the system. The amount of this waste depends on the condition of the organs of digestion, and not on the size of the animal.

3. The amount of food necessary, depends on the *natural waste from the substance of the body.*

The bodies of animals are constantly changing. Small portions are constantly passing off, and their places filled by secretions from the blood. In this manner, the whole substance of the body, including the bones, is supposed to change in from three to five years. More than half of all the food consumed by sheep, is applied to this waste, and carried off as excretions from the lungs, the skin, the kidneys, and the alimentary canal. The amount of this waste depends on the condition of these organs, and not on the size of the animal.

4. The amount of food which a sheep requires, is affected by the *age* of the animal.

Young animals require more food to supply a greater degree of activity in respiration, digestion and assimilation.

5. The amount of food is affected by the *condition of the animal.*

6. More food is required to supply *certain drains* from the system.

More food is required during *gestation* and *lactation.* Fine wooled sheep secrete from the skin, an oleaginous substance called yolk. This secretion increases as the condition of the animal; is constant, and in amount, reckoned by Youatt, at one-half the weight of the fleece. It operates as a drain upon the constitution, which must be supplied with additional food.

All these circumstances have their influence in determining the amount of food which the sheep requires; and fully justify the position that it does not depend on size alone.

Second—The food consumed by a sheep, is not a measure of the product, in either flesh, fat, or wool.

The sheep may be considered an animal machine. The different kinds are machines for different purposes; one adapted to the production of wool, another of flesh or fat, and a third neither. If a certain quantity of food be given to these different animals, the products will differ as certainly as if a bushel of corn were fed to a corn mill, a starch machine and a distillery. The first two would produce equivalents, but of different kinds, while the third would waste all. The product in these cases, will depend in *kind,* upon the nature of the mill, and in *quantity* upon the perfection of the machinery. So in feeding the animal, the product will be flesh, fat, wool, or nothing, according to the *nature* of the animal, and the *amount* of either, according to the degree of perfection in the organization of the animal. More generally the product of machinery, whether it be a sheep or cotton mill, depends on the nature and perfection of the machinery, and not on the amount of material consumed, and still less on the size of the building which contains it.

It is a common opinion that all the elements of flesh, fat, and wool, contained in the food of sheep, will go to the formation of these products. Thus a writer, otherwise very intelligent, says, in the Patent Office Report for 1851, "every particle of food, containing the elements of wool, will be assimilated in such a manner as to increase its growth." Then, as a pound of dry hay contains the elements of a pound of wool, and each sheep consumes the equivalent of ten times its weight annually, then sheep of one hundred pounds weight would produce annual fleeces of just half a ton each.

Some may be surprised at the assertion, that a ton of dry hay contains the elements, of a ton of wool. Here are the figures. One hundred pounds of hay and wool contain (omiting fractions) the following elements:

	Hay.	*Wool.*
Carbon,	50	50
Hydrogen,	6	7
Nitrogen,	3	17
Oxygen,	38	22
	97	96

The truth is that, of the elements of wool, contained in the food of sheep, not more than an average of one pound in three hundred, ever goes to the formation of wool. A small amount of the same elements go to the formation of flesh and fat; for the most unlike of these, viz., flesh and wool, are composed of the same elementary substances, and nearly in the same proportions. They contain respectively in one hundred parts:

	Flesh.	*Wool.*
Carbon,	51	50
Hydrogen,	7	7
Nitrogen,	15	17
Oxygen,	21	22
	94	96

The remainder of these elements go to supply those wastes described in the former part of this article. When it is proved that the average of sheep at maturity, appropriate to flesh, fat, and wool, less than one pound in a hundred of the elements of these substances received in their food, we are prepared to admit that some sheep may lose more than others.

A given amount of food will not produce like returns in the form of flesh, but the result will be affected by various circumstances, as, 1st, the *age* of the animal.

In the very young, a larger part of the food goes to the promotion of bones; and in the very old, a larger part is wasted. The old machinery becomes worn and imperfect.

2. It is affected by *climate.* A few ounces of rice form as much human flesh in China, as ten pounds of whale blubber near the poles.

3 It is affected by *action.* A sheep in constant exercise, will not make as much flesh from a bushel of corn as one lying at rest. Of two horses, one at rest and the other at hard labor, if fed alike, one may become fat and the other poor. Hence the practice of shutting animals up in the dark to fatten. It is on this principle that hybernating animals pass the winter in a semi-torpid state without food.

4. It is affected by the amount of intellect. The laboring brain consumes food as really as the working body, and the sheep with the smaller and less active brain, will form more flesh on a given amount of food, than the more active and intelligent.

5. The product of food is affected by temperament. This is more obvious, but no more real, in the human species. Of two men, one may have a low lymphatic temperament, in which the stomach predominates, and is the most active and important part of the system. The brain is small and indolent—the hair thin, soft and suety—the eyes dull and lead-like—the blood pale and thin, crawls through the veins with slow and languid pace, while the respiration, as slow as consistent with life, consumes but little carbon, and leaves much for the production of fat. The only organ of the brain which appears to have any thing to do is alimentiveness. In such a man, the brain, nerves, muscles and blood all rest, that the stomach may work. This man's evident destiny is to sit quietly—eat heartily—sleep soundly, and be fat. The other may have a high nervous temperament and an ever-working brain, whose fires, fed on all the combustibles of the system, send lightnings over the electric nerves and burning lava through the veins. The idea of fat on such an organization, is absurd. It would be as rational to expect fat from feeding Cleopatra's mummy. In the first case, the food is used for the formation of flesh and fat; in the second, it forms neither, but is exhausted on the operations of the mind. Thus the same food might produce in one case fat, and in the other thought, between which those who believe that equal food gives equal products, must form an equation.

Such are some of the numerous causes which affect the demand for food and its products. But these circumstances do not affect all animals alike. Probably no two sheep ever had precisely the same organization, either in kind or perfection of mechanism. A slight defect in any part of the wonderfully complicated machinery, affects the result. A broken tooth—an imperfection in the minute gland which supplies the saliva—the least mistake of the stomach in the composition of the gastric juice—a slight inaction of the lacteals, or any one of ten thousand other imperfections of the animal machinery, would affect the result.

That sheep have their organizations both different in kind, also in the kind and degree of imperfections, is proved by observation and experiment. Every man who observes sheep, knows that of different kinds fed alike, one will produce more wool, another more flesh or fat, and a third neither. The same animal will not excel in the production of *both flesh and wool.* The reason seems to be that as both these products are composed of the same elements, those used to form one cannot at the same time be used to form the other. Hence the incompatibility of wool and mutton—the one must yield to the other. Some are so happily organized as to produce a fair quantity of both flesh and wool, but *excellence* in both is not to be expected.

From the deductions of philosophy and well established theory, we are compelled to conclude that animals do not consume food in proportion to their size, neither do equal quantities of food produce equal results. The subject might be safely left here as fully proved, and my task done, but fortunately reason and theory have in this case been fully sustained by *experiment.*

It has been proved by actual trial, that if a number of sheep be fed alike, some will have too much, others not enough, and perhaps no two give precisely the same result in either flesh, fat, or wool; and that the larger sheep may be so, not because it has taken more food, but because it has made a different use of it. The same has been observed among other animals. If two pigs, for example the Suffolk and land-shark, of different organization, but equal size, be fed alike, the former will leave a part of his food and become fat, while the other may consume all, and gain nothing. The difference is that one converts his food into flesh, while the other exhausts his in locomotion and noise.

So also among the human species, it is observable that size has very little connexion with quantity of food, and that those who consume most remain small, lean and hungry still. One who has had great experience in feeding animals, Col. SHERWOOD, says some where, that in feeding animals, "their size is no rule at all."

But the most satisfactory and decisive experiments on this subject, are those of J. B. LAWES, Rothamsted, England. The object of his experiments was to determine, with the greatest possible certainty, the different results from feeding different kind of sheep. The experiment was performed with large numbers of the various kinds, and continued during several years. They were conducted with the greatest care, and are worthy of careful study and entire confidence. Their practical value can scarcely be overrated. The result, so far as pertinent to this subject, was—

1. No two kinds of sheep consumed food according to their sizes.

2. No two kinds produced wool according to their food.

3. No two kinds increased in flesh according to their food.

4. They did not produce loose fat according to their food.

5. The Cotswold sheep gave a larger increase, from a given amount of food, than any other variety.

It appears then to be fully proved both by reason and experience, that the amount of food which sheep require, depends on the various causes specified, and not on *size* alone, and that the quantity of flesh, fat or wool, which a sheep will produce, is determined, not by the quantity of food consumed, but by the nature and perfection of the animal organization.

These general principles are equally applicable to all our domestic animals, and the obvious importance of the subject will justify or at least apologize for the length of this article. Its chief object is, to correct the common impression that agriculture is the appropriate sphere of dullness, and to show that, on the contrary, the selection and culture of a single class of animals alone, requires the most refined and correct taste, acute perception, large observation, careful study, and long experience.

If this article shall in the least aid in fastening this impression on the minds of the young farmers of our country, the writer will never regret that, in its preparation, even at this most busy season of the year, the pen has usurped the place of the plow. JOHN T. ANDREW. *West Cornwall, Ct.*

Nitrate of Soda—No. 2.

MESSRS. EDITORS—In addition to the synopsis which we have prepared of the experiments of Mr. PUSEY, with nitrate of soda and nitric acid, we herewith present you and your readers with some farther information on the same subject, gleaned from reports which we find in a foreign paper of late date. The following may be taken as a fair specimen of the effects of the application of nitrate of soda on pastures. Mr. MAIN of Mid Lothian, in a prize essay in the Transactions of the Highland Society 1853, gives the results of an experiment. In a field consisting of 15 acres, six years in pasture, nitrate of soda at the rate of 1½ cwt. per acre was applied. Previous to the application, "12 cows starved upon it." After being top-dressed, 13 milk cows, 5 young cattle, 3 colts, and at intervals 60 sheep were grazed upon it.

In a field which had been three years in grass, nitrate of soda, gypsum and other top-dressings were applied to different portions. That portion to which the nitrate was applied at the rate of 1 cwt. (112 lbs.) to the acre yielded an increase of 1¾ ton over that portion which had no application, and also over that portion to which gypsum had been very liberally applied.

Other experiments equally favorable, have been reported from time to time for some years back, in British agricultural journals. In combination with guano, striking results have also been obtained; and it is usually from such a combination that the largest profits have been realized.

As a top-dressing to oats, nitrate of soda has produced results similar to those above alluded to on grass. One English farmer reports an increase of 16 bushels of oats over the product of a field undressed, and the gain at over $10 an acre, after deducting the expense of the nitrate. On strong land this same experimenter found that the result was barely sufficient to pay the cost of the nitrate.

A farmer in Derbyshire, top-dressed a field of 10 acres of heavy soil, on a clay bottom, with 1 cwt. of nitrate to each acre—one land excepted—and the result was an increase of about 16 bush. oats, and a corresponding increase in the amount of the straw. Estimated profit after deducting cost of nitrate about $10 an acre.

It may be well to mention, however, that at the meeting of the Royal Agricultural Society of England on the 23d of March last, reported in the Mark Lane Express of March 27th, a communication was received to the effect that several comparative trials of nitrate and guano on oats, had led the writer to prefer guano. In one experiment he applied 1½ cwt. of nitrate on one portion, and 3 cwt. of guano on another. The oats top-dressed with the nitrate kept a bluish sort of color throughout the season, did not ripen equally, and were soft in the ear; while those which had guano ripened equally and had a harder, crisper ear, and weighed better. That the writer of this report was not prejudiced against the nitrate is evident from another part of his communication in which he states the results of an experiment made on a field of grass. On one portion of the field he applied 2 cwt. of nitrate and 1 cwt. of salt; on another portion 4 cwt. of guano, and on the remainder of the field no manure was applied. The nitrate gave about 3½ tons of hay per acre, the guano a little under 3 tons, and on the portion which had no manure the amount of hay was only about 1½ ton. Independently of the increased weight of hay from the nitrate, the writer prefers that manure for either old or new grass, as it appears to require but little moisture to fit it for reaching the roots of the plants. A strong dew in the course of one night appeared sufficient for that purpose; and in about 36 hours after its application the grass turned to a luxuriant dark green color, whereas the guano requires a good shower of rain to fit it for acting on the grass, and unless it gets such a fall of rain it does little good.

On barley the nitrate has been applied so as to yield very large profits—7 to 14 bush. of increase.

The experiments have been numerous with Wheat. From various reports we note the following amounts of excess of dressed over undressed portions of a field.

1st,	4 bushels	2 pecks.
2d,	5 do.	2 do.
3d,	6 do.	
4th,	10 do.	
5th.	12 do.	
6th,	13 do.	
7th,	The amount of excess not stated: the yield, however, 65 bushels per acre.	

When nitrate of soda has failed to do good, it has been owing probably, either 1, to the article not being genuine; 2, to being applied at an improper season; or 3, to its having been applied to land so high in condition that nitrogenous manures proved injurious by producing too luxuriant a growth of straw. *

A box 8 inches by 8 inches square, and 4-2 inches deep, will contain one gallon.

Gypsum and Ammonia.

Messrs. Editors—As the time of making compost is at hand, and the use of gypsum as one of their ingredients, has lately been decried, I take the liberty of giving you the substance of the results of some experiments recently made, bearing upon that point.

It is well known to the most of farmers, that during the decay of animal and vegetable matter, a quantity of *ammonia* is found which from its volatile nature is very liable to evaporate, or pass away in the atmosphere, very much to the deterioration of the value of the substance as a fertilizer, for ammonia is a very beneficial manure. The form in which it flies away, is generally that of *carbonate of ammonia*, a very volatile pungent salt known under the name of hartshorn. Various means have been suggested and used to fix this, that is, to render it less volatile and keep it in the material in which it is formed for the purpose of using its valuable compounds as fertilizers. A common way has been to mix gypsum (sulphate of lime) with the material used in compost heaps, when a mutual decomposition takes place, in which carbonate of lime and sulphate of ammonia was formed. This last salt is much less volatile than the other compound of ammonia mentioned, and is therefore more easily retained in the heap. It has recently been denied in a scientific journal, that this change does take place—that dry or nearly dry carbonate of ammonia will decompose and be decomposed by gypsum, and therefore that it would not fix the ammonia, and that its addition to other manure, added to its value, only by its own ingredients—not by saving other valuable products. This statement has been copied in several popular newspapers, and if incorrect should be refuted, as it pretends to be based upon the unerring laws of chemistry.

I took three samples of gypsum, (the common, such as is used here by the farmers,) and treated them with carbonate of ammonia in different ways, imitating the condition of the compost heap. The first I moistened slightly after mixing the two together, not making them more damp than they would be in a heap of compost.

The second I left *dry* as they were mixed.

In the third, I did not allow the two to come in contact, at all, but kept them separated, so that to unite, the carbonate of ammonia must come in contact with the gypsum as it evaporated.

In all three cases, I exposed them a few days to air mixed with carbonic acid (conditions always present in the compost heap,) at the ordinary temperature of my room, and then exposed them to the pure air until the carbonate of ammonia had all been decomposed (or evaporated,) and afterwards examined them chemically. *In all cases a mutual decomposition had taken place.* The gypsum (which was originally present in the largest quantity,) contained much carbonate of lime, and a corresponding (apparently so at least,) amount of sulphate of ammonia was present in the mixture, which I separated by chemical means, and examined.

As I have remarked, the gypsum was present in excess, and so it should be in the compost heap,—that is, there should be more than enough present to decompose all of the ammoniacal compound. Otherwise there will be some that will escape, and undoubtedly a small quantity always does escape, not coming in contact with anything which will retain it, for it is difficult to have such substances thoroughly mixed thro' the mass.

I think these experiments show that the use of plaster, or gypsum, for this purpose, is founded on sound principles, and consequently are safe to follow. Such experiments have been frequently made by others, and I intend if possible, the coming summer to carry on these further, and see if such changes do actually take place in fermenting and decaying barn-yard manure, the result of which you shall have, if you think them worth your attention. Yours truly, Wm. H. Brewer.

Stumps and Simple Stump Machine.

Messrs. Editors—In your paper of the 27th, is an article on the decay of stumps, which I cannot allow to pass without having a kick at it. Stumps should never be induced to rot above ground, but below; nor with the exception of sugar tree, should fire ever be applied to them. In clearing, all trees less than two feet in diameter, should be cut 18 inches from the ground, and the edges of the stump nicely bevelled with the axe, so that the doubletrees in plowing may slide freely over them. If the earth is kept well dug with the mattock, and soft, about them, the roots will decay in a few years, so as to admit of their easy removal. Very large trees need not be cut so low, because it is impossible for the team to straddle them; and it is best to have them so high that your horses will not attempt that feat, if the driver should be so careless as to permit them. An easy mode of producing rapid decay in large stumps, is to split them by blasting with powder, thus admitting the rain and melted snow to penetrate to their main or tap roots.

The cheapest and most convenient stump machine for the farmer's use, consists of a stout pole 18 or 20 feet long, and a very strong log chain with which to fasten one end of the pole to the stump. A yoke of oxen hitched to the other end and driven around, soon twists the stump out of its bed. Occasionally some digging and cutting of roots will be neccessary to facilitate this last operation; but if stumps are properly grubbed about, in the first plowing of the ground, they can be taken out when the ground is soft, in the spring or autumn, with very little trouble. Paul A. Way.
Sewickly Valley, Pa.

Plant a Tree.—As an encouragement to every body to plant a tree, the *Prattsville Advocate* states that there is now standing near Grace Church in that village, a tree which was planted by three little boys forty-four years ago this spring, which measures thirteen feet in circumference and is estimated to contain four cords of wood. One of the boys who helped to plant this tree, still lives in the village.

Clearing and Seeding New Land.

MESSRS. EDITORS—In the 93d page of *The Cultivator* of this year, we had your answers to queries proposed by "Novice," of Pine Grove, Ohio, and having had some experience in clearing new land, let me give a few thoughts on the subject; not that I expect to give any new light, but to do my part in circulating a knowledge of each other's experience, and to call out light from others.

1. If the inquiry should be the cheapest and most expeditious mode of bringing new land, whether bottom or upland, into grass for mowing or pasture, I should say, if the timber be large, to deaden the land by girdling the useless timber in June, July and August, while the sap is in full flow, and the leaves are out. The small stuff should then be cut down, cut up and thrown into as few and compact heaps as possible, and burnt in September. The land may be sown to wheat in October, and grass in March, or the grass seed may pe put in with the wheat in Oct. Dont be small and stingy about the grass seed, but put on at least 12 quarts of timothy and four of clover, or 16 quarts of timothy alone; and about the harrowing, whenever your neighbors say, "hold, it is enough," then go over it as thoroughly again, and you will get the ground into so fine a tilth, that you will get a great crop of grain and grass. If you undertake to cheat the earth at this stage of the business, it wlll cheat you. If preferred, the land may be sown in as thorough a manner to oats and grass the next spring after girdling. Instead of oats it may be put into corn, after as free a harrowing as we have before mentioned; and with two good hoeings, the land may be brought into a good clean condition to put into wheat, by cutting up the corn in the first of Oct., and setting it up around the large stumps, or hauling it off and setting up along the fences—then sowing to wheat the last of Oct, and stocking down the next spring. This girdling is said by those that have tried it, to be very beneficial to all soils, a clay soil in particular, for the soil yields easier to the plow, and is far more productive than lands that have had all the timber taken off in a green state. I refer now to the first cultivation after clearing. Again the roots of a tree girdled and left standing, will not resist the plow so long as the roots of the stump of a tree cut when green, by at least three years.

The next summer after this girdling, even if no grain crop is put on, a hay crop of from one to two tuns per acre can be taken, if the ground in some dry time has been gone over with this very free harrowing and no cattle are allowed to run on it when the ground is soft. One of my neighbors, an honest and experienced farmer, says he has obtained one-and-a half tons per acre the first season of sowing grass seed on such new land, and one of your late correspondents states that he has easily obtained from two to three tons per acre. The upland will be dry enough without ditching, but bottom land is liable to be more or less wet, to have places of standing water, swampy boggy ground, sometimes filled with bushes, and a free use of the spade will ditch off the water and reclaim much of such land and make it yield the better crop of any thing put into it.

Now from the girdled standing timber, a sufficient amount may be cut down for rails, and if there is a good lumber, stave and fire-wood market near, the bodies of the remaining timber may be pretty much consumed for lumber, stave and cord-wood.

2. You have advanced the idea that "to assist their decay, (stumps) a pile of turf or earth placed on each is a good thing." I think the more you dig the ground away from a stump, the sooner it decays. It is well known that fence posts rot out first just at the surface, while a few inches below the post is but little consumed. But if you mean that turf or earth should be put on the *top* of the stump, I will agree with you, and a greater effect may be produced by digging out a small place in the center of the top of the stump, or boring in a few inches with an augur, then put on your sod or earth. After two or three years, and after a long dry time, the sod and earth may be removed and fire put in their place and into the hollow stumps, and in a few days and with a little feeding, these stumps may be consumed roots and all.

But to go back a little; if "Novice," or any other person clearing land, has time, means and inclination, it would perhaps be safer and better in the end to make good clean work as they go along. Fall the trees into winrows, cut and pile the limbs closely, so that fire will burn them up clean, when they are well seasoned. Now is the time to make out the cord-wood, and pile it up between stakes, unless it is to be drawn off before fires are lit on the piece. And now is the time to make out staves and saw out rail cuts and saw-logs, Whatever timber is not put to the above use, should be cut up fourteen ft. long for logging. The best time for chopping is in winter and spring, and for clearing any time after haying and harvesting.

3. For three or four years, while the stumps are rotting out, there is probably no better purpose to which the land can be devoted than to the rearing of cattle and sheep. J. H. M. *Oberlin*, *May* 10*th*, 1854.

Breaking Colts.

MESSRS. EDITORS—I read an inquiry of H. N. C. in the April number of your Cultivator. He wants a few hints on the subject of breaking colts.

In breaking a colt we should never attempt too much at a time. I first break it to lead; then put on gears and lead it till it becomes accustomed to them; then hitch it to a sled. (I think a sled much better than a wagon.) It is best to have three horses and to work it some time to the empty sled. Teach it to walk in the gears at first, and it will learn to pull by degrees. We should always treat a colt with kindness, not severity, and try to make them think that we do not want to hurt them. Care and kindness is the principal thing. I have broke several, and always had good luck and but little trouble. J. S. H. *St. Clairsville.*

Mode of Applying Nitrate of Soda.

Messrs. Editors—In previous communications we have stated such results from the application of this chemical manure as will most probably induce some of your readers to make some trials of its remarkable fertilizing powers. It has produced such increase in crops of grass, hay, oats, barley, wheat, and such profits, that it seems well deserving of farther trials in this country. To those who intend to experiment with it we would offer the following hints, gleaned from the reports of those who have been the most successful in applying it in England and Scotland.

Nitrate of soda is found especially useful for those soils which are deficient in condition, where both soil and subsoil are light, with a tendency to deficiency of straw. On such soils it has been found quite profitable to apply nitrate, whether the crop is hay, grass, wheat, barley or oats. When intended for hay, an equal money-value of guano, viz., 2 cwt. along with 1 cwt. of the nitrate will usually be more profitable than the applying of 2 cwt. of nitrate alone.

Nitrate of soda should not be applied when the land is saturated with moisture, but when it is rather dry than otherwise. Just before a rain is a most sutiable time for its application. Until the nitrate is dissolved by rain or a heavy dew, and thus washed into the soil, it must of course remain inactive. Two applications, two to four weeks apart, are found to be better than one application, the quantity being no greater in the one case than in the other. If grass is to be cut green for soiling, so that there is no danger of lodging, a double quantity (2 cwt.) may be applied with or without an equal quantity of guano. The nitrate is best applied to wheat, oats, &c., when the blade is up 3 or 4 inches. To prevent too heavy a growth of straw, and consequent lodging, 1 cwt. of the nitrate and 2 cwt. of common salt will generally be found the most profitable quantity, applied at two separate times. To assist in its more equal distribution, saw-dust or some equivalent dry powder may be mixed with it. Common salt is sometimes used in larger proportions—as much as 3 cwt. per acre—it being claimed that it thus keeps down weeds, and gives to wheat, &c., a stiffer and firmer straw, preventing lodging, rust and mildew. The average quantity of nitrate to an acre is 1 cwt.

In conclusion we would state that last year only about 100 tons of nitrate were used in Scotland; whereas orders and sales this year show that more than 500 tons at least will be disposed of. This, at 1 cwt. per acre, will manure 10,000 acres. *

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Agricultural Education.—The trustees of the University of North Carolina have, in compliance with the demand for more practical education, established professorships of Analytical and Agricultural Chemistry and Civil Engineering—the department of Chemistry, by Prof. B. S. Hedrick, and that of Engineering, by Prof. C. Phillips. We were gratified to learn, as we do by a letter from Prof. Hedrick, that his department is in successful operation, the number in attendance being larger than was anticipated.

National Cattle Show.

Arrangements have been made for a national exhibition of Cattle, to be held under the auspices of the United States Ag. Society, at Springfield, Ohio, on the 25th, 26th and 27th days of October next. The time has been fixed at so late a day, in order not to interfere with the State and County Shows; and no doubt a vast many of the prize cattle of these different shows, will be present on the occasion. The Executive Committee say: Six thousands dollars will be distributed in premiums for the best stock of the various breeds of Cattle, subject to competition without territorial limit. Springfield is centrally located as regards the cattle region; it is most convenient of access by railroad from every point of the compass. The means for accommodating, at very moderate charges, a large number of persons are ample. Private houses will be opened for the reception of guests. There are also eighteen cities and towns within reach by an hours' ride on the railroads, on which extra trains will be placed to accommodate such as wish to go elsewhere for lodgings. About twenty acres of ground have been enclosed, and more than three hundred stalls will be prepared for the shelter of cattle during the convention. It is expected that very liberal arrangements will be made by all the railroad companies, both for the transportation of cattle and the conveyance of passengers to and from the Fair.

Plaster for Potatoes.

Messrs. Editors—I beg the privilege of stating to the readers of the Country Gentleman, an experiment which I have tried in raising potatoes. I have planted on all kinds of land; and to my satisfaction, have found that dry, poor land is best; because they are much less subject to be destroyed by that baneful scourge the potatoe rot I last year planted the driest and poorest part of my cornfield to potatoes without any application until after the first hoeing, when, having some plaster left after plastering my corn, I applied it to about half of my potatoes on the hill. At the second hoeing a vast difference was perceptible in the vines. The plastered part continued in advance through the season. At the time of digging, there proved to be double the quantitiy, and of a much larger size. There were some indication that some had decayed among the whole, but no more of the plastered ones than the other. I shall try the same plan this year. Lucis Griswold. *Milton, Ct.*

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Meat for New-York.—The New-York Tribune furnishes a variety of interesting statistics in relation to the number, weight and value of the animals butchered weekly in New-York. The number of beeves slaughtered during the first three months of the present year was 36, 249, the estimated value of which amounts to $2,120,562, or an average of $167,280 per week, which the city pays to the country for beef alone. The number of sheep and lambs butchered during the same time was 90,616—swine, 67,763—calves, 10, 376.

Proper Time for Cutting Hay, &c.

Eds. of Country Gentleman—I have been looking for some more extended suggestions in your paper, on the subject of hay, either from your pens or those of your experienced correspondents. Indeed it seems to me that the public needs to be enlightened upon this subject, and to your sheet, with its deserved reputation, we must look for the lead. Not only the producer, but the purchaser, should have a correct view of the subject, for much hay is grown and cured with reference to the *taste* of the buyer, rather than to the benefit of the animals that consume it. The demand in market is all for timothy, especially for horses, and that cut when the seed is fully grown. Nothing else passes as good hay in our markets. In France and England, I understand clover sells as No. 1, and in Boston and other New England markets, foul meadow takes the precedence. I have fed to horses, cattle and sheep with good success, all varieties of clover from the largest to the smallest (white); also timothy, red top grown upon dry ground, and mixed with clover and timothy and June or spear grass from rich and damp ground; and I have found the more varieties grown the larger the yield.

There is, however, I apprehend, one fault, and a great one, of the farmer, which contributes to the peculiar and exclusive taste of the buyer, that is the mode of curing. Late cut grass is cured when cut, but early cut must be cured with care and skill, as it will suffer in nutriment or become musty. But before making any suggestions upon the mode of curing, I will offer my views in short upon the time of cutting

I have no doubt that grasses of all common varieties, are at their greatest perfection for hay when in the blossom. The after growth is more abundant when cut in that state; the ground better protected from the rays of the sun, and the roots left in a more vital state for the succeeding crops: and, in addition, the barn-yard is spared from much foul seed, which matures in late cut hay. This, I may say, is the result of my limited experience and observation. My childhood was spent upon a farm in Windsor County, Vermont. Clover was there generally mowed in June, and the good farmers commenced haying, (of their English grass as they called it,) by July, and I am fully convinced their hay was more nutritious than our late cut hay. Cattle, sheep, and even horses, grew and gained in flesh, upon this hay. And on occasional visits to that section, when I have driven my own horses, I have found they would do better on the hay in Vermont than in New York. In the western part of New York, where I had what was properly called a grain farm, for some years, I often had an opportunity of testing the value of hay which I had cut early, and cured, my way with that purchased, cut and cured to the fashion of the market. My horses, when fed on clover hay, grown upon my own farm, without grain, did as well as when fed on the purchased, with eight quarts of oats daily. It would afford me much pleasure to see further light beamed upon this dark subject, in your columns.

BEST MODE OF CURING HAY.

My mode of curing hay was derived from directions given by Judge Buel, about the time he started the Cultivator. The mowing should be performed when the grass is free from rain water or dew; and when the grass is wilted it should be cocked, observing the rule invariably; never spread the grass or open a cock unless through carelessness water has got into its midst. If the prospect of weather is good and the yield large, what is mowed in the forenoon and up to mid afterneon is turned over in the swath before the dew falls, so as to expose the green surface to the dew. The next day it is cocked either from the swath or winrow, by placing one fork full upon another without rolling up. This is the most important thing to be well done in the whole process of hay making, and every man must be instructed to do it the very right way, and no other, or the whole system fails. When cocked it should remain unopened until cured, from wo days and upwards. The cocks should be made small in circumference, and as tall as they will stand; the grass being cocked when heavy, they will not blow over easily. For experiment, I have allowed the cocks to stand three weeks, and I think without injury. The same came out bright in March, with the heads, leaves and blossoms of the clover on, and as bright as when cut. I find most men, after the hay is cocked, are impatient to stir it. After a long rain, I let the cocks remain until thoroughly dried upon the outside, about two days; and then if wet at the bottom, invert them, ready for another rain upon that end; or if good weather, draw it in soon thereafter.

In this way, I never have had hay badly cured, in the worst of weather. Care and judgment will overcome the worst of difficulties. I have had cocks out from one to two weeks in severest rains, without material injury. A cock well made, has a well thatched roof and water will not pass in over an inch. If the weather is doubtful, the grass is spread, and if light it should be cocked the same day it is mowed. But the farmer has no business to have light grass. Two and a half tons to the acre is the least he should have when long enough on the farm to prepare and seed his meadows. It is miserable economy to have less.

There is another way of securing hay, which I have known some good farmers practice. That is, cut the grass when in blossom, free from wet; wilt it, and draw it to the barn in that state, and keep the barn as near air-tight as possible. I have understood this is extensively practiced in Pennsylvania, where they have stone barns well adapted to the practice, and one of the most intelligent and prosperous graziers of Chemung county, told me this was his practice; he said the hay would mold a little, but the cattle would eat it as well or better, and he thought it more nutritious—probably better for cattle than horses or sheep.

INQUIRIES ABOUT DRAINING AND IRRIGATION.

And now gentlemen, I wish a little advice on the subject of draining and irrigation. I have seen the boy who blew the fire to roast his ear of corn, and then blew the corn to cool it. Now all the rage is to make the lands dry by drainage, and also make them wet by irrigation. I have cultivated a farm at the West, which nature had drained, it being a gravelly loam soil, some two feet deep, upon a compact clay subsoil—all that was wheat land, corn land or grass land. I removed to this farm two years ago. The 200 acres under what is called improvement, lies between the Champlain Canal and the Hudson River; the west 100 acres nearest the canal, is what is denominated good meadow land—subsoil, clay; surface, clay or clay and sandy loam, with a few inches of muck generally. The eastern parts, river flats, generally dry, with wet places, and a ridge west of the flats, but not so high as the meadows; generally dry, based on the slate, and mostly overlaid by clay, sandy and gravelly loam, with wet depressed holes in spots. I commenced near the river, to drain one field every year until I went over the whole farm. But the idea of irrigation has come in like backwater upon my notions of drainage, and the question is, where shall the line be where the two contending systems meet? or shall both run over the whole as a tree and vine covering the same space? I have no doubt as to pursuing the drainage as to the 100 acres next to the river, which, if I pursue grazing as I intend, would be sufficient to raise all the grain and roots required for the farm; but as to the other, comes the question, will that, well prepared, be as profitable in durable meadow and pasture? and how prepared, by draining and then irrigating, (there is a supply of water for that) or neither? This land is now wet in the spring and fall, and dry during the summer. It seems to me that it is now in about the same state as that described by Mr. MORRIS (in his valedictory address to the State Society,) as irrigated on the slopes of the Alps. Would not the use of the subsoil plow in preparing this, do all that is required as drainage for permanent meadow or pasture? and then if more water is needed, irrigate? I can readily conceive in our climate, on gravelly lands, irrigation would be very beneficial; it will not only afford moisture but will make a porous soil more compact; and here arises a query, whether for that reason it is not detrimental to a clay soil—will it not make it too compact? if it brought on a fertilizing sediment it would enrich by that means—and again if irrigation will produce rot in sheep who feed upon the pastures overflowed, I should think the evil would be as great as the benefit. Yours, &c., L., *Strachan Farm, near Mechanicsville, N. Y.*

* * *

CALIFORNIA WHEAT CROP.—An immense breadth of land was sown to wheat the last autumn, and the crop is now represented in the most flourishing condition. It is said that the larger portion of the yield last year averaged 50, and frequently as high as 60 to 70 bushels per acre. Estimating the present crop at only thirty bushels, of which there can be no doubt, it is thought that it will be abundant to supply all the wants of the State.

Covered and Uncovered Manures.

MESSRS. EDITORS—In the No. of *The Country Gentleman* for Feb. 23rd, there is, under the caption of "Truths not yet adopted in Practice," a very urgent appeal made to farmers to adopt more generally some efficient measures for the protection of their farm-yard manures from the destructive effects of exposure to all the winds, rains, and scorching heats of the year. That appeal, we trust, will be heeded by those interested, as many thousands of dollars' worth is annually allowed to go to waste for want of some suitable care of yard manures.

Having lately perused some account of experiments made by Lord Kinnaird, reported in the Journal of the Royal Agricultural Society of England, on the comparative value of covered and uncovered manures, it occurred to me that a brief sketch of these experiments and their results might contribute somewhat toward fixing in the public mind an impression of the importance of more care, than now generally prevails, in regard to protecting yard manures and saving them from waste.

In 1851, a field of 20 acres, of very equal quality, being a rich loam naturally dry and in good heart, with an exposure to the south, was selected for the experiment, and divided into two equal portions. The manure was applied at the rate of 20 cart-loads per acre. The whole field was planted with potatoes; the seed all of one kind; and planted first and second weeks in April. All brairded well, and showed no difference in growth till the first week of July, when a decided superiority began to manifest itself in the half of the field manured out of the covered yards. The vines on the portion of the field manured from the exposed yards began to decay by the latter end of July, while the other portion of the field still retained its strong dark green. The crops were taken up on the 1st to 4th of October, and after careful measurement and weighing of two separate portions in each division, the result was as follows:—

With uncovered manure.

	tons.	*cwt.*	*lbs.*	
1st measurement—1 acre produced	7	6	8	of potatoes.
2d do 1 do do	7	18	99	do

With covered manure.

	tons.	*cwt.*	*lbs.*	
1st measurement—1 acre produced	11	17	56	of potatoes.
2d do 1 do do	11	12	26	do

As soon as possible after the potatoes were harvested, the field was cleaned, plowed and wheat drilled in, at the rate of 3 bushels per acre. As soon as the weather was suitable in the spring, the *whole* field got a dressing of 3 cwt. of Peruvian guano per acre. During the winter very little difference was apparent; but shortly after the application of the guano, the wheat on that portion manured by the covered dung took a decided lead, which it retained all summer. The whole field was cut on the 26th of August, 1852; the portion manured by the uncovered dung being at least four days earlier than the other. As before, the two separate portions in each half of the field were measured, cut and stooked separately. On the 4th Sept., each portion was thrashed, the grain carefully measured, and the straw weighed. On account of a wet season the grain was of lighter weight than usual, in G. Britain, per bushel. The result of the experiment was as follows :—

Produce in Grain.			*Weight per bush.*	*Produce in Straw*	
acre.	*bush.*	*lbs.*	*lbs.*	*stones.*	*lbs.*
With uncovered manure.					
1st	41	19	61½	152	of 22
2d	42	38	do	160	do
With covered manure.					
1st	55	5	61	220	of 22
2d	53	47	61	210	do

These and similar experiments have satisfied Lord Kinnaird of the advantages to be derived from having farm-yard manures put under cover. They seem so conclusive and instructive on this point as to deserve to be brought before the farming classes of this country. Not a few of your readers, we doubt not, will take measures of some kind to profit by them. It will require but a few minutes to determine the probable profits of protecting any certain amount of yard-manure. It appears from the above results that Lord Kinnaird got about 125 bushels of wheat more from the ten acres manured with covered dung, than from the 10 acres which had been manured with the uncovered. In wheat alone, then, without taking potatoes or wheat straw into account, the difference in favor of *covered* manure was quite considerable. *

Weeds—Weeds !

We often observe, in passing through the country, the pastures of poor farmers crowded with *armies*—not of Turks and Russians—but of mulleins, horse-thistles, and other invaders, which not only devour the strength of the land and pay nothing in return, but continually say, like impertinent tell-tales, to every passing traveler, in the language of a celebrated writer, "Behold the field of the slothful, and the field of the man void of understanding! For lo, it is all grown over with burdocks, and Johnswort has covered the face thereof."

We take it for granted that no reader of this journal ever voluntarily allows weeds to grow on his premises, but some, however, obtain stealthy possession—and if some of our good friends of this class would go over their grounds, make a careful observation, and estimate the amount of vegetable growth thus feeding on the strength of their soil, which might as well be wheat, corn, and ruta-bagas, they would certainly be surprised at the amount. It would be a curious question in philosophy, why so many will thus allow a yearly waste from weeds of some fifty or a hundred dollars, with all quietness and submission, who would be ready in a moment to bring an action at law against a neighbor, whose cattle and swine should devour a fifth part of that quantity.

If we could only have all the value of the riches of the country at large thus wasted, placed in our hands for endowing agricultural schools, there would be no necessity whatever of applying to national and state legislatures for help.

Now is the very point of time for thinking this matter over, with a determination to act efficiently in the premises; and if any one is too busy or "*drove*" to attend to it, he has certainly either undertaken the care of too much land, or else is pursuing a system which may emphatically be compared to "saving at the tap and wasting at the bung." No one is ever too busy to turn his neighbor's cattle out of his cornfield—and he ought to pursue the same system towards other intruders. We have known farms to be affected in market value from five to ten dollars per acre, by being kept neat and clean in one instance, and foul, weedy, and repulsive, in the other.

Remedy for Smut in Wheat.

MESSRS. EDITORS—I see a writer in the Country Gentleman, asks for a preventive for smut or fungus in wheat. This, together with the frequent inquiries made by our northern friends, in the wheat growing regions, induces me to give you one that is simple, cheap, never failing. It is simply a soak in water in which blue vitriol has been dissolved, in the following proportions: For each 4 or 5 bushels wheat, dissolve 1 lb. blue vitriol in water sufficient to cover and properly soak the wheat; let it remain in this soak 20 to 24 hours—sow immediately after taken out of the soak. Pursue this annually and properly, and my word for it you will never more hear complaint of smut in wheat, however badly the seed from which it was grown may have been mixed with smut. This is the discovery (at least in this state,) of an old and successful planter and wheat grower of this district; and has been tested many years, always successfully, by hundreds, yea thousands. Some say this soak also effectually eradicates chess, in a few years, but of this I am not fully satisfied. But when properly applied and used, that it is a sure and effectual remedy for smut, there is not the shadow of a doubt.

If new, or untried, with you, get a single farmer to make the experiment. He, you, or the country generally, will never regret it. R. STEWART. *Newberry, S. C.*

Destroying Brakes, Ferns, &c.

MESSRS. EDITORS—In looking over the Jan. No. of *The Cultivator*, I noticed an inquiry of D. C. L., Essex, Vt., as to the best method to destroy Brakes and Ferns. Having some experience in the matter referred to, I would state for the benefit of those who are desirous of ridding their land of these troublesome intruders, that there is a "royal road" which leads "to destruction." To kill out brakes, mowing in June and Sept., kills them in 2 or 3 years, except the bog brake, the crown of which must be cut with a bog-hoe or spade. Docks and burdocks are destroyed in the same way. Fern, mowed any time from the 20th of June to 1st of Sept., raked and burnt, prepares the land for after improvement. The next season a good many sprouts will start up, enough to discourage the inexperienced, but keep the guide board up at the beginning of the "royal road,—" (here lies the secret)—in August, when well up, mow close to the ground. They require no raking—if any start the third season, serve them in like manner, and that is the end of them. This course with me has always proved successful. For further proof, examine your meadows that are mowed every year—there are no ferns growing. C. S.

Shelburne, Mass.

Saving Clover Seed by Machinery.

A very interesting communication lately appeared in the American Farmer, from Edward Stabler, of Sandy Spring, Md., one of the most intelligent and best practical farmers of our country, on the use of the mowing and reaping machine as a saver of labor. From a note just received from him in relation to the same subject, he says, "I do not in the least doubt that the mowing and reaping machine has fully saved half its cost to me in the last harvest—and even more, if I had taken into the account, the loss in my grass and grain crops without it. Hands with us could not be procured sufficient for both crops in proper season, and many who depended on hand work had to neglect the grass to save the grain. I have no interest in any machine, but I feel a great interest in helping on my brother farmers, north and south, in lightening their burdens."

We furnish the following extracts from the article we have referred to above, which will amply repay a perusal, and show the economy, even to those cultivating small farms, of the machinery alluded to. The public will await with interest further information on the particular kind of contrivance used in these experiments for raking the cut grass off at the side of the machine. On the subject of *cleaning* clover seed, some very valuable hints may be obtained.

> A large portion of my crop of clover seed the past season was so fallen and lodged, that scarcely half the seed could be saved with the cradle; consequently, we were compelled to resort to the slow and expensive mowing with scythes, or use the machine. The trial with cradles, resulted in breaking out the fingers, and leaving much of the best seed uncut; the scythe was both too slow and too wasteful. Indeed to look over the fallen and tangled mass of vegetation, persons unacquainted with the machine would have supposed it impossible to cut it clean, with any thing short of the scythe.
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> The machine (one of Hussey's improved) was set to cut rather higher than for mowing, and by a side delivery of my own construction, the seed was delivered at the side and out of the track, in straight loose bunches in the best possible order for curing and taking up afterwards; and with almost the precision of clock work. It was one of the most beautiful and perfect farm operations I ever saw—scarcely leaving a head standing to the acre, and literally leaving nothing for the rake to glean afterwards. It was completely cut and raked, in about one-third the time the same hands could have properly raked it alone. We would occasionally, though not often necessary, throw out of gear, pass on through the cleared track, and only cut across and against the lean; in this way every head raised up 4 to 5 inches high, or above the guards, [snakes heads included] was not only cut, but *saved* on the platform. We could well afford to lose a little time in this way, when the machine was doing the work of full ten to a dozen scythes.
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> The seed is usually left from 5 to 10 days in this state, in order to make it hull more readily; and a shower or two on it, improves it both for the threshing and hulling operations. At a leisure time in winter, and in cold dry weather, we pass it through the common wheat thresher to separate the heads from the straw. If in good order for threshing, the spike concaves are removed, and blank ones substituted in their places, which answer a better purpose; avoids cutting up the straw, and rendering the raking much less tedious.
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> The next operation is the hulling; this is done either by running it two or three times through the same machine (spike concaves replaced) as fast as it can be forced in by a board fitting the opening, and having a short handle in the center, 15 or 18 inches long. It is then fanned, when the unhulled seed, falling near the fan, and being much reduced in bulk, may all soon be hulled by passing 4 or 5 times through the machine; or secondly, by an opening to feed in the front of the thresher, about 9 or 10 inches wide, and another opening at back, at the opposite end of the cylinder, the chaff passing diagonally through; but this plan without much care, is very apt to cut or break too much seed; neither does it save much time, as the feeding is necessarily slow.

After some remarks of a more general nature on the different kinds of reapers, and in which further practical knowledge is needed, he makes the following very just remarks:

> There is however one thing that must be borne in mind by those who would use mowing machines to the best advantage; it is absolutely necessary to farm neatly,—to clear the ground from stone, stumps, and abrupt inequalities on the surface. For a *Farmer* to expect to mow close and clean, without the trouble of picking up the stones, and with the knives cutting through the earth and gravel, is about as reasonable, and as profitable too, as for a mechanic to undertake to plane up his boards covered with grit, or driven through with nails.

Training Colts.

Mr. Tucker—Your correspondent H. N. E. inquires "how to break colts." I will give him the benefit of my experience. While the colts follow the mare, or at the time of weaning, is the proper time to halter them. At first lead the dam in advance, and let the colt follow. If it refuses to obey the halter when pulled, turn it one way and the other a few times, and it will soon obey. If haltered at this early age, they are easily managed, and there is little or no danger of injury to the colt. Continue to handle them while young, and they will seldom become unmanageable. The winter before they are two years old, it will do to begin with the "bitting-bridle." Do not buckle them up too tight at first, or leave them in the bit too long—an hour will do—which may be repeated in two or three days. It is well to exercise them in this way several times—then attach long reins to the bit, and drive them about the yard. Do this a few times, when you may harness them with a quiet gentle horse and drive not more than two miles, as, if they get tired and discouraged, it is apt to break their spirits. Always use gentle means—never whip a colt. It is the *whip* that makes more balky horses than anything else.

The best feed for colts is good clover hay, cut, with bran, or shorts. It is also the cheapest. Carrots are excellent for colts, say about four quarts per day. The first winter is the *trying time* for colts. It is then that they require nursing and extra feed. I keep mine in a stable without any floor, and give them regular daily exercise, which I consider important. J. *Brandon.*

Foreign Correspondence.

NITROGEN.

MUNICH, BAVARIA, May, 1854.

MESSRS. EDITORS—The nature of the sources of the food of vegetables is a topic of deep interest to the farmer who is intelligent in the study and pursuit of his profession. But a very few years have elapsed since this subject began to excite the altention of those capable of subjecting it to a successful examination, and to-day we are in the midst of an era which is occupied with solving the problem. Already so much is known with regard to this matter as to furnish one of the most interesting chapters in physical science. Yet from year to year the formerly received principles require extension and correction from the results of new researches.

The farmer knows that the muscle which sustains his labor, and the nerve which impels and guides it, contain as an invariable and essential ingredient, a substance called azote, or nitrogen. He knows that it must be contained in his food in order that it support life, and of course also must be obtainable by the vegetable which is the only ultimate source of animal nutrition. It is assumed as a general thing that the chief hindrance to perfect vegetable development is a deficiency of this body, or at least a deficiency of those forms of it which are capable of giving it to the plant.

Chemistry teaches that there occur in nature, but three bodies which can directly supply the vegetable kingdom with the nitrogen needful for its growth. These are, 1st, the free nitrogen of the atmosphere; 2d, ammonia, existing in air, in water and in the soil; and 3d, nitric acid in union with ammonia, potash, soda, or lime, in the atmosphere, in water or in soils.

It is proposed in this paper briefly to review the facts and doctrines hitherto received concerning the availability of each of these bodies as sources of vegetable nutrition, and to bring forward the interesting results of recent investigations.

1. To what extent is atmospheric nitrogen directly assimilable by plants?

Four-fifths of the air which constantly bathes the leaves of plants is nitrogen.* The result of nearly every one of the earlier investigations was, however, that this nitrogen does not contribute directly to vegetable growth, and accordingly in the standard treatises on the chemistry of vegetation it is accepted as a fact that nitrogen is acquired by the plant from other sources. Boussingault, indeed, was led by some of his grand trials to suppose that atmospheric nitrogen might be directly absorbable, but his results have been usually explained in another way. Very recently investigations have led to the fact that the nitrogen of common air is actually absorbed and assimilated by plants. Dr. Knop of Leipzig, in a series of experiments upon aquatic plants, found that shoots of the common "cat-tail," when brought into glass vessels, inverted in water and partly filled with an air consisting $\frac{2}{3}$ of nitrogen and $\frac{1}{3}$ of oxygen (in such proportions are oxygen and nitrogen found in the air which is dissolved in spring water) in a short time completely absorbed it. During the last two seasons Ville, a French chemist, has experimented with tobacco, the sunflower, and wheat, in the following manner. He sowed seeds of these plants in soil free from all nitrogen, viz., pure sand mixed with the ashes of the plant experimented with, and contained in a glass chamber, the air of which was statedly renewed. He determined accurately the small quantity of nitrogen which the imprisoned plants could receive from the ammonia of the air admitted to them; he also found how much the seeds sown originally contained: the sum of these two, however, in every case fell short of the amount of nitrogen existing in the plants at the conclusion of the experiment. The difference so far as can be seen must have been furnished by the atmospheric nitrogen.

The only report of his experiments that I have seen does not afford any data for ascertaining what plants assimilate the nitrogen most readily, and therefore stand least in need of artificial nitrogenous manures; but we may hope before long to learn many facts of practical importance from the prosecution of similar but more extended inquiries.

2. What part does ammonia and its compounds play in vegetable development?

By whatever natural process animal and vegetable matters containing nitrogen are destroyed, whether by undergoing the changes that accompany animal nutrition, by burning, or by decay, their nitrogen is converted into the compound called ammonia. In nature ammonia always is found in the state of carbonate (salts of hartshorn, smelling salts) which as well known is so volatile as to diffuse itself rapidly through the air, and as nitrate which is highly soluble in water but not volatile. Ammonia itself is a compound of nitrogen and hydrogen. According to Mulder, the humus, or vegetable matter of the soil devoid of nitrogen, in its decay evolves free hydrogen, which at the moment, unites with atmospheric nitrogen, producing ammonia. The animal kingdom furnishes indirectly a large share of the ammonia that occurs in nature. The muscles, nerves, and other tissues of an animal, as is well known, are constantly wasting as a result of their use, and as constantly being renewed from the materials of the food. In the animal as well as vegetable, the carbon, hydrogen and oxygen of the food are mostly reduced to bodies of very simple constitution, as carbonic acid and water, and in these shapes separated from the system through the lungs, (leaves) or by the perspiratory process through the skin. In the animal, however, the used-up nitrogen is not excreted as gaseous ammonia, for that would be

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* The mixture known as atmospheric air, is composed, under almost all circumstances, quite uniformly as follows: In 10,000 parts,

Nitrogen,	7912
Oxygen,	2080
Carbonic acid,	4
Carburetted hydrogen,	4
Ammonia,	trace.
	10,000

highly disagreeable were it to pass off as carbonic acid does in the breath, but the urinary functions are charged with its excretion, and from them it is separated in the *solid* form, and to a great extent as a substance which may be obtained in beautiful white crystals, and which is known to the chemist as *urea.* This body, dissolved in the urine, very soon becomes decomposed, and what is remarkable, it falls directly into carbonate of ammonia. We hardly need stop here to adduce facts to prove that ammonia acts favorably to vegetation. Every farmer knows it. Some trials made by Ville are, however, too interesting to be passed over. He caused plants to grow in chambers, to the air of which he added a small quantity of ammonia. He found that the addition of 4-10,000 of ammonia to the air, produced a result apparent to the eye after a few days, and thereafter becoming more and more considerabls, making the vegetation luxuriant, and giving the foliage a deep green color. The highly important fact was fully proved by him that the amount of nitrogen in plants grown under these circumstances, was far greater (almost the double) than in an equal weight of the same kind of plant which had grown in the ordinary air.*

The fact that ammonia exists in the atmosphere has been known for a long time, and several attempts have been made to determine the amount therein. The results of different experimenters are very various. Those of Ville are the most recent, and have been conducted with such care, and on so large a scale as to give them the preference over all previous ones. He found the quantity to vary between 31 and 16 parts in 1,000,000,000. In 16 experiments the average was found to be 22 parts in 1,000,000,000. In the article to which I have had access, he does not communicate the circumstances causing these differences, but they are probably to a great degree due to meteorological changes. How they might have been affected by rain, fog and dew, will be seen by the experiments of Boussingault, which I here communicate.

Boussingault has investigated the amount of ammonia contained in rain water. Since the forms of ammonia found in the atmosphere are very soluble in water, it appears that a rain would wash them out of the air and carry them to the soil. This is found to be the case to a great extent. Boussingault's experiments were conducted in the country at a distance from the abnormal atmosphere of large towns, and the water falling during each rain was collected in 5 to 8 separate successive portions, and the ammonia content of each separately determined. He always found that the first portions of rain contained the largest amount of ammonia, the quantity decreasing, and at last almost but not quite failing entirely. He also found that when an interval of but a few hours elapsed between two showers, the quantity contained in the first portion of the second shower was always greater than that yielded by the last portion of the first rain. After long continued dry weather the ammonia was more than when rains were frequent. When the fall of rain did not exceed 2-100 of an inch, the ammonia formed 311,000-1000,000,000. A fall whose depth was between 2-100 and 4-100 in. contained 121,000-1000,000,000, and between 4-100 and 20-100 in. 70,000-1000,000,000, between 20-100 and 1 25-100 in. 45.000-1000,000,000. During one rain of 1¾ hour in August '53, commencing at 4½ P. M. after ten days of dry weather, fell 5½-100 in. water; about 1¾ galls. were collected and contained in the gall. (wine measure)8-100 of a grain, Troy, of ammonia; nearly the half of this was collected in the first sixth of the shower. Two days afterward it began to rain at 7½, A. M., and rained gently till 11, A. M; 8½ in. fell; about 2¾ gall. of water were collected, the average content of which was only 2-100 of a grain per gallon. Of the total amount, more than the half was contained in the first fourth of the rain, more than ⅓ in the first eighth. The total quantity of ammonia was less than ⅓ that found in the rain of two days before. At 6, P. M., of the same day fell a sharp shower lasting ¼ hour. The collected rain was about 1-3, and the ammonia was 4-5 that of the morning rain. The reason of the small amount of ammonia in morning rain is, doubtless, that the dew of the preceding night had washed the air to a great extent, while between 11, A. M., and 6, P. M., evaporation went on rapidly, carrying the ammonia again into the air. Boussingault was able on several occasions to collect sufficient dew (½ gallon) to determine its ammonia. He found that body present in greater proportion than in rain. He also collected atmospheric water during fogs, and found in it as much ammonia as in dew, and on one occasion the water contained so much that it was detectable by the ordinary tests. Boussingault remarks to the effect that "these facts explain themselves, by the nature of the carbonate of ammonia which, doubtless, is the form in which the greater part of the ammonia exists. This carbonate is volatile and very soluble in water. Formed in or upon the soil, from decay, &c., it continually passes off into the air as vapor, and it is clear that it will be taken up by rain, dew, &c., and brought again to the earth, and that rain will contain more when it begins than when it ceases. When the rain is over the carbonate vaporizes again, and indeed faster, according as the temperature is higher, and the physical and chemical properties of the soil favor evaporation. There thus occurs a perpetual exchange of ammonia between the air and the soil."

From the 26th May to the 16th Nov., Boussingault examined all the rains, dews and fogs which could be collected. On a surface of 268 sq. ft. he collected 462 gallons of water, which contained a little less than 14 grains of ammonia, a rate of a little more than 5 oz. per acre. Admitting as much as this to be actually brought within reach of the plant, it is but a small contribution to the growing crop. An acre of wheat yielding 30 bushels, contains nitrogen equivalent to 30—35 lbs. of ammonia, or 100 times the amount brought to the soil from the atmosphere. It must be borne in mind, however, that the ammonia brought to the soil in the dews of every night, not taken into the above account, is quite considerable.

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* The details of Ville's experiments will occupy a special article in some future number.

Boussingault has made numerous analyses of spring and river water, with reference to their ammonia, and finds its amount exceedingly small except in cases where it might naturally be looked for in unusual quantity. It hence appears that the atmospheric water loses its ammonia in filtering through the soil. The retentive faculty of the soil has been so often discussed in your paper that it is now unnecessary to recur to the subject. As a consequence of it, ammonia accumulates in the soil to a certain extent, though to what extent is not accurately known, as the experiments made upon this point have been incorrectly carried out. In 16 recent analyses of soils, I find an average of 14 pts. of nitrogen in 10,000 of soil. Were this all ammonia as some have assumed, and as is probably the case, it is equivalent to more than 3,000 lbs. per acre in a depth of 6 inches—a very large supply, if it be indeed actually a *supply*. 300 lbs. of guano is a large manuring, yet can yield not more than 60 lbs. of ammonia; and if this amount be doubled the crop is often spoiled from excess. It is plain, then, that our knowledge of the state in which nitrogen exists in the soil, is entirely too vague to warrant much speculation upon the extent to which it is available to the plant.

The extent to which ammonia exists in soils, and the conditions under which they yield it most rapidly to plants, are subjects in the study of which important practical results may be expected to be attained. It is immediately important to know if every acre of soil of fair quality does contain 3000 lbs. of ammonia, and to know how to make this possible stock tell most favorably upon crops.

It is very rare that the retentive power of a soil is called into full action: it always remains ready to absorb new bodies that may be presented; at the same time small quantities of ammonia produce highly remarkable results upon plants growing in clayey and retentive soils.

It is an interesting fact, that crops of meadow hay, clover and peas, grown on a tolerable soil, without manure, contain far more nitrogen than wheat or other cerelians raised on the same soil, with the aid of manure. In how far this depends upon the structure and habits of the plant, upon its ability to assimilate free nitrogen, or appropriate the ammonia of the soil, upon its slow or rapid growth and maturity, its greater or less expansion of root and leaf, must be decided by future investigations.

But this article has already reached such a length, that some remarks that might be made upon the natural supply of nitrogen through the *nitrates*, may be omitted, more especially as it is highly probable that this source of nitrogen is very insignificant under most circumstances, and our knowledge of the subject is certainly very limited. S. W. Johnson.

Breaking Young Animals.

A story is told of a person who traveled through England exhibiting feats of horsemanship, and when at the residence of a certain nobleman, after he had done with his own horse, he turned and said, "Now my lord, I am now willing to ride any horse of yours in the same manner." The nobleman, for sport, had one brought out which unknown to the equestrian, was ungovernably stubborn. The man deliberately mounted, but the animal when urged would not move. After a pause, he quietly dismounted, gave it *one* severe cut with his whip and again resumed the saddle. The animal remained unmovable, but the man retained his complete self-control, and got down a second time and repeated the blow, but with no better success. After the third stroke, however, there was no further trouble —the animal moved forward in perfect obedience.

A great many, doubtless, would have looked upon this feat as an exhibition of some particular *charm* which the horseman had over the beast. But instead of this, it was one of the simplest operations imaginable, and one which any one could easily perform. It was only necessary for the rider to keep himself and the animal *cool*, and to impress the latter with the distinct and single idea what the stroke of the whip *was for*, and the business was done. A *single stroke*, with a considerable pause between, excites an irresistible terror and dread; but a *shower of blows* would be not only unintelligible to the animal, but would excite a fury of passion and a feeling of resistance that would only increase the obstinacy, and make the matter worse. At the same time such a course would have only destroyed the self-control of the rider; and it may be laid down as an axiom, that he who cannot control his own temper, cannot properly manage an animal.

The writer has applied the same mode of treatment in subduing vicious and kicking cows, with complete success. Animals, that even the most daring of ordinary milkers would not think of approaching without previously cording strongly the hind legs, have been completely cured, not like the quack teachers of French, "in six lessons," but in three milkings. The cow, placed in a small yard, was neither tied nor otherwise confined; a cow-hide was placed under the left arm, and milking commenced. The instant kick was eluded, and an equally instant and severe stroke of the cow-hide followed. Especial care was taken that the cut of the whip should always follow the kick, and never but one blow, no matter what the provocation might be. If the cow started to run, the same solitary blow fell upon her face. At all other times, she was spoken to firmly and soothingly, accompanied occasionally by a gentle friction of the hand. It required but very few administrations of this regimen for the animal to understand, very distinctly, exactly what was meant, and what the blow was for; and if this is *invariably* and faithfully attended to, a single milking will commonly be nearly enough to change the habit, and one or two more will completely confirm it. But if the operator *sometimes* omits the punishment, or sometimes strikes *twice*, he may as well give up the attempt at once.

We have known the most furious animals so changed in a fortnight by this management, as to stand quietly through a milking with a dreamy expression of face, quietly chewing the cud, when formerly all was rage, fury and terror. The whole was accomplished by a self-controlling exercise of the simplest common sense and reason.

Nothing is more common among boys and thoughtless persons, than a treatment of animals which one moment's reflection would show to be ruinous to their quiet and gentle habits. A cow kicks spitefully, but happens to do no harm,—she escapes the penalty. She accidentally moves her foot and upsets a full pail of milk,—a tempest of blows descends upon her. Such a course will soon spoil any cow. Or, her kicks are borne without notice till the patience of the milker is exhausted, and then commences a general broadside of kicks, thumps, and blows. It is impossible for any animal, possessing even the sagacity of a politician, to understand such treatment, or to form any distinct connexion between cause and effect, offence and penalty.

It often happens that animals are untractable solely because they are not familiar with men. The most successful trainer of oxen we ever met with, always made this his first point of attention. When he was about to commence operations, he enclosed a considerable number of young steers in an ample yard, and spent several hours in merely passing round among them in order to render his presence familiar to them. The timid amongst them soon learned that he was neither a tiger nor a boa-constrictor, but a very harmless companion. Occasionally, he would touch them gently with his hand, till after a time they became accustomed to his touch, and finally to handling freely. After several hours spent thus, he next applied the ox-bow to their necks—then by gentle pressure, perseveringly continued, he learned them to follow—by degrees they were drawn side by side—then yoked together—then led or driven about. By coolness, determination, and perseverance, he often succeeded in breaking them without striking a blow; and the remark has been often made that oxen of his training were the best-broken of any in the country. By operating on six or eight yoke at once, especially during the earlier part of the process, he did not lose any time, and could afford to be patient and deliberate in the treatment.

Wire and Live Fences.

Mr Tucker—I notice in your paper, an inquiry respecting Wire Fences. The writer has had but small experience; but proposes to give that for the benefit of your inquirer. The last fall, my son made nine or ten rods of it. Set a post very firmly at each end, and one in the middle—then drew wires of large size tort and straight, fastened at the ends, and also to the middle post by staples made of wire. Then placed uprights of scantling, about twelve feet apart, and fastened the wires to them with staples, and interlaced the whole with small wire in the most approved manner. It looked well at first; but the first time my horse was let loose by it, being a little playful, the first dash he levelled half of it, coming down broadside to the great risk of his neck and limbs. The other half the wires have stretched so that every wind sways it to and fro; and altogether it is as great an eye-sore as any decent man would like to see on his premises.

I would remark that my horse has not been accustomed to break out of enclosures, though the fence happened to be low; and the wire fence was from five to six feet high. I would advise your inquirer and all others to try but a short piece first, and think they would never wish to add to it. D. *Watertown, Ct.*

Messrs. Editors—I notice an inquiry in relation to the availability of Wire Fences, and having derived much information from the pages of your periodical, it is acting on the merely tit-for-tat principle to communicate in return whatever experience and observation has taught me in regard to those matters that are not as yet brought under the general knowledge of your readers.

The growing sparseness of timber, and the occasional scarcity of stones, in the cultivated districts of the state, induces our farmers to look about them with a little speculation, and much of anxiety in their eye, for something at once cheap and durable, to replace the aboriginal log or worm protections that erst were piled, or wriggled round, the pasture lots and grain fields of old.

The reason that wire fences have been meted out a measure of condemnation, is on account of the general taste and slightness of their construction. The supposition has been that because the notion of their erection was new, four wires and 16 ft. apart posts were full proof; but a trampled down patch of grass, and gaps big enough for a herd to pass, have somewhat corrected the error.

The first wire fence we constructed, was from drawings in the Cultivator. Five wires, with cedar stakes, were stretched down the tempting length of an orchard. The fruit was, however, too much of a temptation, and the barrier too weak—the staples not long enough or strong enough to prevent its becoming an occasional pasture lot, and no patching or boards, or twisting in of rails, was sufficient for an antidote.

The fact is, a wire fence will not be worth any thing as a protection, unless the posts be of good size, 8 or 10 ft. apart, a board at bottom about 8 inches or a foot from the ground, a rail spiked on the top of the posts, and five wires filling the intervening space. Running the wires first on one side of one post, and then on the other side of the other, will not answer as well as boring holes with a small augur, and inserting them through the post. The method of bracing the large posts at the end, as laid down in *The Cultivator*, and the fastening the ends of the wires by staples, cannot, as far as our experience has gone, be improved. I hardly know if the number of wires thus necessary to be used, would be cheaper than board fence, but with us, has the double advantage of using up our otherwise useless wire, and prevents the large snow-banks that often drift to the extinction of any winter grain that may happen to lay contiguous to a fence.

By the way, now I have my pen in the ink on the subject of fencing, let me say a word on live ones. I saw a long length of perfectly impregnable fence, when traversing Columbia county last fall, made of privet, the domestic locust, and white cedar—one-fourth perhaps of the latter. It was a boundary, subject to the depredations of cows on the highway; but, as the proprietor informed me, impervious to their attacks.

Along the public thoroughfares in the valley of the Connecticut, I have observed some of the most beautiful of hedges, formed wholly of the thorny locust I have mentioned. The long dangerous spurs, made them disagreeable to hogs, and marauding cattle, while their foliage was pleasing to the eye, and they were an efficacious protection to the enclosure. Why would not our Osage orange and this locust, interspersed with the Michigan rose, be at once a cheap, permanent, and splendid fence, for the vicinage of the farmer's house, and ultimately his acres? S. A. *Canajoharie.*

Sowing Corn for Fodder.

We have labored for some years past to induce farmers not only to sow corn for fodder, but to do it *right.* We observe repeated recommendations in the agricultural papers to sow *broadcast,* and in a late volume of the Transactions of a State Agricultural Society, the writer of this paragraph is quoted as recommending broadcast sowing. Now, it happens that we have repeatedly for several years, pointed out the great inferiority of broadcast sowing, to planting in drills, which is simply this: Sowing in furrows or in drills requires only about one-half or two-thirds of the amount of seed needed for broadcast sowing, a consideration of some importance when it is remembered that at least four or five bushels per acre are required for the latter mode. Drills, by admitting the cultivator, leave the ground clean and mellow, and this greatly adds to the growth of the crop; they admit of easier harvesting; and yield about one-third more fodder per acre.

The greatest difficulty with this crop is *curing it properly* before stacking. The leaves may become perfectly dry while a large quantity of water remains in the stalks, which causes fermentation and the complete loss of thevalue of the fodder when placed in large stacks. The remedies are early sowing, so as to give the warm weather of late summer a chance for drying the fodder; stacking in large shocks in the field till wanted in winter, or in numerous small stacks if drawn off the ground; building moderate sized stacks, with a liberal application of salt to successive layers as they are deposited, and building each round three rails, set upright to serve as a ventilator.

There are very few farmers who do not run short of good succulent pasture early in autumn. An acre or two of ground for *soiling* at that season, would be almost invaluable. Any good soilwill answer—moist is best; plow and furrow three feet apart—strew along in each furrow from a hand basket, at the rate of two or three bushels per acre—cover by harrowing—run the cultivator between when the corn is a foot high,—and the whole thing is done. Fourteen tons of green fodder, and five to seven of dry, may be had from a good acre. This month will do for sowing, but the earlier the better.

Seasonable Hints.

There are a few important items in the farmer's practice, which are not unfrequently omitted from forgetfulness, at the present busy season of the year, and which it may be useful to remind some of our readers at the present time.

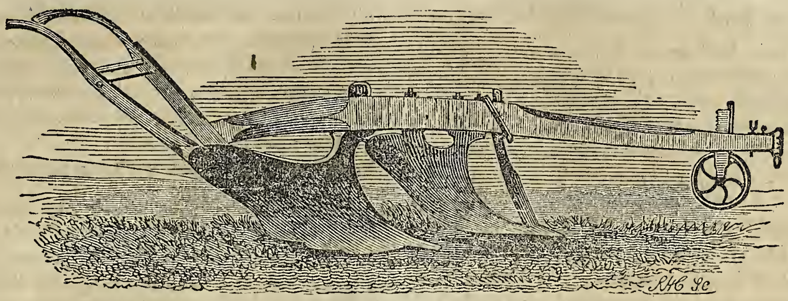
Weeds in pastures are often overlooked, till they have ripened their seed, and scattered enough for a plentiful crop another year. Some of them will be destroyed by cutting with a scythe before or when in blossom—others will need grubbing at the roots. A few hours expended in this way will not only prevent a loss to the soil by growing unnecessary herbage, but give the fields a neatness of appearance, which every good farmer ought to take pride in seeing.

Ruta bagas and other root crops often cost double in cultivation by leaving them at the first hoeing till the weeds have got the ascendancy. The first dressing should be given when the plants are not more than an inch high.

The best hay is that which is made without becoming too dry; but to prevent moldiness, it should be moderately salted. The intermixture of the salt is more perfect when it is frequently applied in successive layers. One peck to a peck and a half is not too much for a ton of hay. Let farmers see that a sufficient supply of salt is on hand before commencing haying, and then it will not be so likely to be neglected.

Those who have young fruit trees on their ground, should not forget that it is vitally important to keep the ground mellow to a good depth for some distance about them—and that for newly transplanted cherry trees, mulching is indispensibly necessary to prevent the death of the trees that so frequently occurs after they have expanded their leaves, from the drouth and heat of midsummer. If plums show the commencement of the black excrescences, cut them off very promptly, and repeatedly as fast as they appear, washing the wounds with chloride of lime, which from the trial we have made, is much better than salt, copperas, or any other application for protecting the spread of the disease and healing the wounds. Remember, now is about the time to watch for the peach borer, so as to cut him out timely.

A CALIFORNIAN VINEYARD.—"The Pacific," a San Francisco newspaper, states that Mr. Wm. Wolfskill of Los Angeles, has a vineyard of 35 acres, with about 1000 plants to the acre, from which he makes each year from 34,000 to 35,000 gallons of wine, which at $1 per gallon would make the produce about $1,000 per acre.



Sod and Sub-Soil Plows.

Sod and Sub-Soil Plows, as perfected in No. 33, *constructed by Ruggles & Co. of Boston.*

This form of plow received the unqualified approbation of the committee on Agricultural Implements, at New York Crystal Palace; and is, in my judgment, one of the most complete implements for the purpose designed, that has been constructed Like every other plow, it works best, where there are least obstacles in the way; but still it is not easily directed from its course; it moves with greater steadiness and uniformity, than any single plow can be made to move;—it can be regulated to any depth of furrow slices;—it completely turns over the first furrow slices, so that the second is thrown without any embarrassment directly upon the first; and so lightly that it can be pulverized, with great ease. When the ground is free of roots and stones, we know of nothing more complete than the work of this plow. From repeated experiments we are satisfied that it is operated with even less power than is required to turn a single furrow, of the same depth and width as the two combined; and when done, that the work is worth double for all the purposes for which a plow is ordinarily used. Our confidence in this plow is such that we can not commend it too highly. P. *May* 30, 1854.

Preparation of Bones for Use.

Messrs. Editors—I have recently read an account in one of your papers, of bones dissolved by ashes, which has suggested to my mind another method, equally as sure, and much more speedy.

Instead of placing the bones in the ashes, place them in the lye extracted from the ashes, which will dissolve the bones in twenty-four hours.

I have tested the truth of this by experiment, and found that a hard bone will become, by this process, as soft as pulp. The chemical process is undoubtedly the same in both cases, but this one is much quicker.

This is also a very cheap method—much cheaper than to employ acids. The amount of strong lye which might be extracted from two barrels of good wood ashes, would dissolve a very large bulk of bones—twenty times the amount which any farmer could find upon his premises. This is not only a cheap method, but a very simple one—one which any farmer could try without putting himself to any extra trouble. Yours, &c., Henry E. Decker. *Nassau, N. Y.*

Pruning Orchards.

It is a very good rule, and the nearer it is followed the better, that no shoot should be allowed to remain longer than one year on a tree, that will require removal at any future time. By observing the form which a young tree should take, and rubbing or cutting off improper or unnecessary shoots in time, any severe pruning at a subsequent period, may be entirely avoided. Hence, the remark has much truth in it, that pruning-saws and axes should never enter an orchard—which is strictly correct in all cases provided the needless shoots have been lopped in time, when the work may be done with the pocket-knife only. A very common error is to allow the growth of too many branches, the result of which is they become overcrowded, a part die, the leaves and new growth are small and imperfect, and as a necessary consequence, the fruit is half grown and stunted. The head should therefore be left open, the branches few, and so evenly distributed through space, that none shall be crowded, and all subjected to the action of air and sunshine, and all continue thrifty and vigorous. A moderate share of care and attention to these particulars, might be made to give a very different report of our orchards, from that now presented by the great mass of apples sold in market. Larger prices, larger crops, and better satisfied purchasers, would be the result;—and most strikingly so provided good cultivation were given in connectfon with judicious pruning.

Now is the time that young orchards should be examined and treated in the way we have pointed out.

To Protect Young Vines from Bugs.

The idea that young vines may be protected from the depredations of bugs, by the application of soot, ashes, or any thing of the kind, is in my opinion a *humbug*. I have tried all such applications on my cucumbers, melons and squashes, without success.

The only way to preserve vines, is to place over each hill a box, say six or eight inches square and four inches high, and cover it with oiled gause or glass. This is a *sure* method, and costs but very little. I plant my vines on very rich gravelly land, put about a quart of finely pulverized hen manure, covered two inches with fine earth, in each hill, water them occasionally with a mixture of one qt. hen manure to two gallons of water, taking care not to let it touch the plants or roots, and always am repaid by a good yield. S. *Castleton, Vt., May* 8, 1854.

Stone and Brush for Drains—Muck for Manure.

Will you be kind enough to inform me through *The Cultivator*, which is the best for filling a drain, brush or round stones? Also, what kind of land it is the most profitable to put lime on, and how much to the acre?

We have a large swamp near us that is covered with water. Would not the muck be advantageous as a manure? whether best applied alone? and to what kind of land? AN ATTENTIVE READER.

Stone will of course last much longer than brush, but if the soil is quite soft, or of the nature of quicksand, it will be nearly impossible to prevent its running in among the stones and choking the drain. If the draining is so effectual as to keep it quite dry at all times of the year, this difficulty will be lessened.

Brush, (especially if of the most durable kinds of wood,) is best for soft soils, where the quantity of water to be drawn off is never large. Even after it decays, it leaves small channels through the soil for the water to soak away. On account of its exclusion from the air in a great measure, brush will last much longer than if exposed. It is said there are instances where it has continued to answer a good purpose for fifty years.

There are many theories as to the kind of land most benefitted by lime; the best way is to try it on a small scale and observe the results. From fifty to 300 bushels are applied per acre. Magnesian lime, being very caustic, must be applied the most sparingly.

Muck is not unfrequently a good manure applied alone, but the best way is to drain the swamp, shovel out the muck, and let it become well dried under a shed, and then mix it with yard manure, when it forms a capital compost.

Destroying Canada Thistles.

"Is there any mode of eradicating Canada thistles from land, short of digging them out, roots and all? Is there a chemical agent that will destroy them? A man is traveling about here, selling a white powder, which dries them up when applied to the cut surface when mowed—he claims it will kill them *permanently*—please tell me what it is, and if there is any virtue in it?" S. H W. *Easton, Pa.*

Canada thistles are easily killed on heavy soils, by plowing them under completely, once a month for the season, which smothers them, and the roots die. Unless the leaves, which are the lungs of a plant, can develop themselves above the surface, the plants cannot breathe, and will die in one season. The success of the operation depends of course, on keeping down *every* thistle plant below the surface. On light or gravelly soils, they cannot be so completely smothered, and in addition to the plowing, Boughton's "subsoil cultivator" or thistle-digger, described some months ago in this journal, and which is in fact a two-horse paring-plow, will prove an efficient auxiliary. Mineral poisons usually prove destructive to vegetables; but it would puzzle a very shrewd man to know a "white powder" some hundreds of miles distant, without ever seeing it. If it kills all the thistles above ground for one entire season, they must of course be "permanently" killed, for the reasons already stated; but such an agent could be of little value in any way, because the labor of applying to every individual in a thistle-patch of only one acre, containing probably a million stalks, would be no trifling task, compared to plowing in four or five times.

Awarding Premiums on Domestic Animals.

MESSRS. EDITORS—I have noticed a communication of Mr. SPENCER of Windsor, Vt., in the May No. of the Cultivator, on the subject of the most profitable breed of sheep to grow wool from. The thought occurred to me at once, that of all other men, Mr. Spencer, if not *best qualified*, was at least well prepared to answer his own questions, being as he says the owner of Silesian, French, Gaudaloupe and Spanish Merinoes. I have viewed with some surprise, for years past, the manner in which our Agricultural Societies have awarded premiums on sheep; they being given in most cases to pet animals. Now if you please, I will suggest an idea to all Agricultural Societies as to the mode in which Mr. Spencer's question should be answered.

Let a committee of one or three be appointed; put into the committee's possession a certain number of the different breeds of sheep in the country—let the expense of keeping each breed be accurately recorded for one year—then the profits—strike the balance, and the question is answered. When we talk of the profits of sheep, wool and mutton should both be considered.

This mode of testing the point, must necessarily be attended with some expense. I can think of no better, for testing the value of all our animals. If any gentleman can propose a better method, please be kind enough to divulge it. J. N. SMITH. *Vergennes, Vt.*

Nursery Trees.

I have lately contracted for various kinds of fruits from a nursery in Ohio, the agent being around making engagements to be delivered in the winter. Does a person usually get the kinds contracted for? Is it policy to buy fruit trees grown in Ohio and transplant in west Tennessee? Will it do to remove strawberries in December? An answer to the above in the Cultivator, will much oblige ALVAN HENRY. *Purdy, Tennessee, May*, 1854.

Two requisites in a nurseryman will insure the correctness of his trees, namely, honesty, and a thorough acquaintance with fruits and his business. If in addition to these, the agent is also a strictly honest, careful, and intelligent man, our correspondent will get the sorts he bargains for. We cannot, of course, decide on the probability, not knowing any of the parties. Trees grown in Ohio will transplant well into Tennessee, *provided*, as in all other cases, they are properly treated. We would never recommend the removal of strawberries at the commencement of winter, as they will be almost certain to be destroyed by frost, unless great care is taken to protect them, without smothering. Early spring is best; immediately after fruiting, is next best, and antumn worst, the later the more unsuccessful—although exceptions, from peculiar or unusual causes, will occasionally occur.

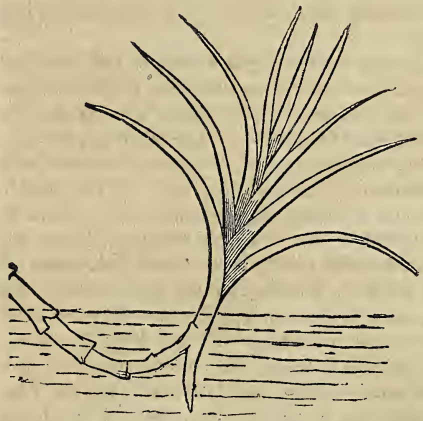
Depth for Setting Trees.

"Will a tree do better to be set four or five inches deep, in a tolerably rich loamy soil, than to to be set only two or three inches deep? S. W. Cowles.

Trees should be generally set the same depth that they previously stood in the soil, allowing an inch or two, more or less, for the settling of the newly stirred earth. On heavy soils, they will be more injured by being planted too deep, than on those of a light sandy or gravelly nature, and where greater depth is needed to prevent the effects of drouth. On lands inclining to be wet, setting trees upon the surface, and raising the earth upon the roots, is a mode that has some advantages, among which are, the greater depth of soil thus made, and the prevention of water settling among the roots. The accompanying figure exhibits this mode of planting, the dotted line indicating the common surface of the earth, on which the tree is set, and above this the low mound is raised upon the roots.

Layering Carnations and Picotees.

The accompanying figure illustrates the ordinary and most successful method of increasing this lovely tribe of plants; for, if properly executed, success is pretty certain; whereas by "pipeings" or cuttings, it requires considerable care and attention to get them rooted.



The operation is simple, and performed thus: Prepare as many small pegs as required, and a little good soil, if the soil they are already growing in is not so, and lay just around the stems of the plants.

Take a sharp knife and trim off the leaves from the strongest shoots, to within a short distance of the top. Make an incision just below a joint, and halve the stem upward about an inch. This forms what is called the tongue, from which the main part of the new roots are emitted. Draw away a little of the soil, and secure the shoots by means of the pegs, in an upright position, and cover over with the soil. In about six weeks the plants will be formed, when they should be cut from the parent, and carefully transplanted, or they may be left, if not over luxuriant, till the ensuing spring before removal. Just as the bloom is over, or about the middle of July, is the proper time to do it. In dry weather, they will require watering every evening till rooted. E. S

Over-Manuring Trees.

Please inform me if the Rhode Island Greening does well in a *very* rich soil. I have two trees of the above mentioned kind, standing in a yard formerly used for a pig-pen. Into this yard were hauled small stones, beach gravel and loam, and twenty-three years ago said trees were placed therein. Old bones and clam-shells have been thrown around them in abundance, and they have grown very rapidly, the circumference of the trunk being respectively as follows:—No. 1, 4 ft. 2 in. No. 2, 4 ft.

The trees blossom annually and seem to pride themselves on a superabundant growth of wood, but, like the fig tree in the parable, they yield not fruit. What can the matter be? W. G Warren, *R. I.*

We have heard of the unproductiveness of the Rhode Island Greening from over fertility of soil, when planted in some of the richest portions of the western country—at the east, the great difficulty with most trees is scant feeding and starvation. If our correspondent will seed with grass, and allow a thick turf to cover the surface for a rod or two in each direction round the trees, so as to check its growth, he may in a few years have a good crop, provided too high manuring is the cause of the dropping of the young fruit, which appear probable.

Rotation of Crops.

Will you please give me a good system of rotation of crops, through the Cultivator? A Subscriber. *Elliott, Maine.*

Systems of rotation must vary according to the nature of the soil in different regions of country, the amount and kind of manure at command, the cleanness of the land, the nature of the market, and the proper distribution of labor. One of the best farmers we have known, had his farm laid out in equal fields, and adopted the following rotation:

1st year—Wheat after clover.
2d " Corn, potatoes and ruta bagas, with all the manure made that year.
3d " Barley.
4th " Wheat, seeded with clover.
5th " Clover, pastured.

A piece of low ground was kept for meadow, and was occasionally top-dressed, and rarely broken up and re-seeded. A rougher portion of the farm was occupied with summer-fallow, wheat, clover, and grass for pasture. This farm was a strong fertile soil;—poorer land would need a longer season in grass, which would admit a larger number of live stock, and as a consequence produce a greater amount of manure.

The following may be adopted, with variations according to circumstances:

THREE-COURSE SYSTEM.

1. Corn and roots, well manured.
2. Wheat.
3. Clover—one or more years, according to fertility and amount of manure at hand.

FOUR-COURSE SYSTEM.

1. Corn and roots, with all the manure.
2. Barley, or peas, or both.
3. Wheat.
4. Clover—one or more years.

Oats are always a severe crop, and an excellent farmer of our acquaintance who adopts the above, never permits oats to grow on good wheat land, but confines the crop to the more moist portions of his farm, adapted only to this and to meadow and pasture.

Agricultural Societies.

VIRGINIA STATE AG. SOCIETY.—The planters of Virginia have done themselves great credit by the liberality and energy with which they have come forward in support of their State Agricultural Society. We see by the Richmond papers, that the society has now about $20,000 already invested, and subscriptions soon to be paid which will swell the amount to $50,000. Their next fair is to be held at Richmond. The city council furnish the grounds necessary for the fall exhibition, properly fitted up, rooms for the officers of the society during the fair, with the necessary police, and pay the society $1,000 in cash, while the citizens of Richmond pledge themselves to add $5,000 to the permanent endowment of the society.

VT. STATE FAIR.—It is to be holden at Brattleboro' Sept. 13th, 14th, and 15th. The inhabitants of Brattleboro' generously pay into the Treasury of the Society two thousand dollars to be expended in Premiums The National Sheep Fair is to be held at the same time and place.

THE JEFFERSON CO. AG. SOCIETY hold their fair at Watertown, Sept. 21st and 22d. Solon D. Hungerford, of Adams, President; John C. Sterling, Watertown, Treasurer; Willard Ives, Watertown, Rec. Sec'y; Hiram Holcomb, Watertown, Cor. Sec'y.

MADISON CO. AG. SOCIETY.—This society has issued their premium list amounting to over $600, but we do not see the time stated when the fair is to be held The officers of the society are S. P. Chapman, Clockville, Pres't; A. Morse, Eaton, Treas.; and S. Lincklaen, Cazenovia. Rec. Sec'y; R. D. Palmer, Lenox, Cor. Sec'y.

BROOKFIELD AG. SOCIETY.—Brookfield, in Madison county, has one of the most flourishing and efficient town societies in this State. Their receipts last year were $496,76, and they had a balance in their treasury at the close of the year of $282.92. We have received their premium list for 1854, which enumerates nearly 250 prizes, well calculated to draw out a full exhibition of all the domestic and agricultural products of the town. The premiums are payable mostly in agricultural works.

FRANKLIN CO. AG. SOCIETY.—Their annual exhibition is to be held at Malone, on the 20th and 21st of Sept. The Society appears to be in a flourishing condition, having a balance of $323,28 on hand at the close of last year's doings. James Duane, Pres't; H. S. House, Sec'y; H. H. Hosford, Treas.

YATES COUNTY FAIR—at Penn Yan, September 14 and 15.

MIDDLESEX (Ct) AG. SOCIETY.—The next show of this well managed society, is to be held at Middletown, on the 27th, 28th and 29th of September. We have from its efficient Secretary, Mr. D. BARNES, a pamphlet copy of its constitution, by-laws, specifications for premiums &c., which give evidence that the society is managed by sound and discreet men.

The Burlington Co. (N. J.) *Ag. Society* will hold their next fair at Mt. Holly on the 3d October. Their prize list embraces an unusual number of premiums, most of which are to be paid in books, &c. of permanent value to the recipients. GEO. B. DEACON, *Burlington*, President; B. BUCKMAN, Secretary.

TRUMBULL CO. (O.) AG. SOCIETY—This society has offered a liberal list of prizes for its next Fair, which is to be held on the 4th and 5th of Oct. Among them are a large number of agricultural periodicals, including the Cultivator, Country Gentleman, Ohio Cultivator, and Ohio Farmer.

The Brockville (*C. W.*) *Hort. Society* has issued a liberal premium list for the present season. It includes the usual Horticultural subjects, and an exhibition of Poultry. The Summer Exhibition is to be held on the 29th of Juue, and the autumnal on the 14th Sept.

Information Wanted.

HORSE-POWERS.—I would like to learn through your columns, which is the best kind of horse-power for a farmer with two horses—the sweep or endless chain, to be used for threshing, chopping fodder, &c. Any of your readers who are acquainted with both, and will communicate on the subject, will confer a favor on M. S. B.

DISEASE IN LAMBS.—I wish you or some of your correspondents to give us, through *The Cultivator*, the cause of and cure for a complaint with which several of our best lamb-raisers have found themselves put to the worst or unable to cure. A lamb is first taken with a stiffness in the neck, and is troubled to raise its head sufficiently to suck—a swelling is seen near the shoulders—the lamb droops and generally in a few days dies. If you can furnish us with a cure it will save the lives of many of our finest lambs. A STEUBEN SUBSCRIBER.

MESSRS. EDITORS—I have been for several years, an attentive reader of *The Cultivator*, and would not take fifty dollars per year for what I have learned from it, which I consider a large percentage on the cost of it. And now with your leave, I wish to make a few inquiries, which if you, or some of your correspondents who have had experience, will answer, you will certainly oblige one and I trust more of your readers.

I am just commencing on a farm of 150 acres, and am convinced from observation, that farming as practiced by nine-tenths of our farmers, is not rendered as profitable or pleasant as it might be, if pursued in a more scientific and systematic manner, combined with discrimination and sound judgment. My first query is, how can I enlarge my manure heap? I have no muck, turf, or road scrapings, within my reach, and cannot get dirt handily that is free from stones. I had thought of hauling spent tan from hemlock bark, two and a half miles, during winter when my teams were at leisure; also saw-dust from hemlock and maple, the same distance; but the old farmers wag their sage heads, and tell me that it won't do. The hemlock sawdust, in its raw state, they say is actually injurious. Now cannot one or all of these articles be incorporated with the stable manure, and managed in such a way as to pay cost?

How shall I manage thirty loads of manure which I now have, and wish to apply to rye and wheat ground in the fall? A great proportion of it lies in heaps as thrown from the cattle stalls, which were littered with cut straw. If it lies in heaps until used, much of it, even after a thorough harrowing, will be left in lumps from the size of my fist up to that of a quart measure, and common sense teaches me that I do not get as much benefit from it as I would if it could be well pulverized before applying it. Will piling it up loosely, and turning it during the summer, pulverize it without any loss by heating and evaporation, and if so how often must I turn it.

Will G. A. Hanchet please inform me what kind of feed cutter he uses, and also whether his engine is movable—if not, it seems necessary that the house and barn should be quite near each other.

I would be pleased also, to have some one suggest the plan of a barn, for the accommodation of thirty head of cattle, a span of horses, and their fodder, on a farm where but little grain is raised.

If I make my stables on a level with the sills, and use the basement for manufacturing manure, would it ever be necessary to throw in water to keep it sufficiently moist?

It is an idea, which I am happy to see is gaining favor with our farmers, that it is necessary to bring pure water into the cattle yards, where it may be at all times accessible for the stock, and as I have myself a preference for cement pipes instead of lead ones, I would suggest to some enterprising Yankee the idea of engaging professionally in the construction of them, believing that practice would enable him to do it as cheaply as the farmer could do it himself or get it done by inexperienced hands, and at the same time leave a margin for profit and for his expenses in removing from place to place. A Young Farmer. *Kent, Conn.*

Bakewell Cattle.—I wish to make the inquiry through the Cultivator, for Humphrey's importation of Bakewell cattle Is there any thorough-bred stock of this kind in the United States? If so, where is it, and on what terms can it be obtained? H. Baldwin. *Hudson April*, 1854.

Culture of Horse-Radish—Machine for Grinding.—Having land capable of producing large quantities of horse-radish, I would give some attention to the cultivation of it, if, at a moderate expense, a machine can be procured suitable for grinding it for table use. Will you please inform me if there is a machine that will answer my purpose; where and at what price, can it be had? W. G., *Warren, R. I.*

Cement Pipe.

Messrs. Editors—In looking at a late number of the *Country Gentleman*, I notice that a correspondent is desirous of learning the best mode of bringing water to his buildings, and if water-lime or cement pipe can be put down with safety. I see what Mr. P., Ohio, says on the subject, which is good; yet as your paper is for exchange of ideas and improvement, I will give you a little of my experience. For eighteen years I have been engaged a good part of my time, in the cement business, forming cement cisterns without stone or brick, and putting down cement pipe, and raising water with the hydraulic ram, which I have on hand of the latest improved and the best in the U. S. I think my method of putting down pipe is less laborious and safer than that of your Ohio correspondent.

1. In the ditch, I have never had any damaged by frost, put down only two feet.

2. For inch-bore, I have a moulding box, three feet long, four inches wide on the bottom, three at top, three and-a-half deep—the moulding rod three feet and-a-half long of turned iron—attached to the moulding rod, three wooden rods covered with copper, and one of wood on the last end—the four, two feet long—all connected by staples that make them three-fourths of an inch apart—the length of rod eleven and-a-half feet.

In digging the ditch, the earth should be all thrown on one side. On the clear side, I place once in about eight rods, one barrel of cement and sand to mix. A light stone-boat is handy to mix on. Place this on the clear side of the ditch. I have one man to mix. I then unfold the iron moulding rod, place the mould on the bottom of the ditch, throw it half full of cement, then bring down the moulding rod on to a gauge on the end of the moulding box, then fill up the mould, smooth it off on top of mould, draw the rod, and set your mould, and keep along; and if the cement is right, by the time the last rod is drawn in, it will be hard enough to throw back the earth. It is best in long runs, to put in breathing pipes once in fifteen rods.

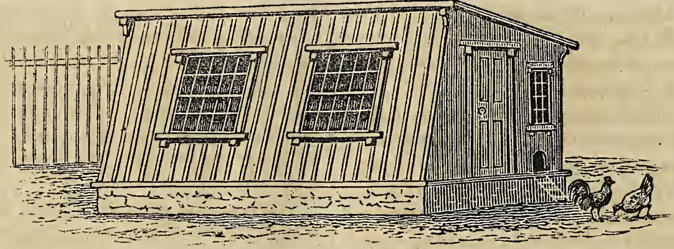
The question is asked, what is the difference between three-quarter inch cement pipe, and half inch lead? I estimate the lowest kind of half-inch fountain pipe at one dollar and eight cents a rod. The expense of one rod inch cement pipe would be seventy-two cents.

The question is asked, can tiles be cemented so that they can be used as lead pipes, for hydraulic rams? From my acquaintance with tile, I think it could not be used.

Those not acquainted with the mode and expense of raising water, by sending a survey to me, with the amount of water running from the spring, I can give them a correct estimate of the expense, and the amount of water discharged through the lead pipe. I devote my time exclusively to the Hydraulic business. A. Butterfield. Post Office address, *Colosse, Oswego Co., N. Y.*

Reaper and Mower Combined

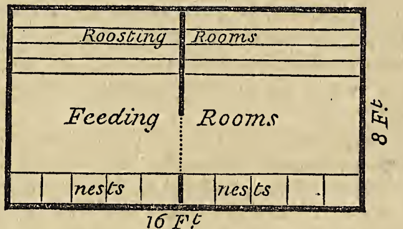
Messrs. Editors.—We notice in the May No. of the Cultivator, an inquiry by B. N. Branner, "which is the best reaping machine, and whether there is a reaper and mower combined, which is as good as the reaper without the mower." There are several reapers in this neighborhood of Hussey's patent. Three of these are reapers and mowers combined, and have answered both purposes well. We have had one in use for two seasons, and last year mowed about twenty acres of heavy, and in some places lodged, clover and timothy, in the most satisfactory manner. This machine cuts equally well through wet and dry grass; indeed we think the management of the knives cannot be easily excelled, but believe, however, that the attachment of a reel, when cutting wheat, would be a decided improvement, as it is now necessary to drive too fast when a fresh wind blows the grain from the machine. L. H. & J. P. Machen. *Walney, near Centerville, Fairfax Co., Va. June 13th* 1854.



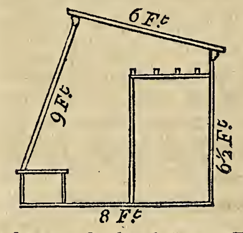
CHEAP POULTRY-HOUSE.

Cheap Hen House.

[The following was sent us some time since, in answer to the inquiry of another correspondent. We have delayed its appearance longer than we intended, and we hope it may afford valuable hints to those about to erect such buildings.]



MESSRS. EDITORS—Observing in a late No. of your excellent journal, *The Cultivator*, an inquiry for the best Coop to accomodate Poultry, I have thought it not out of place to send you a drawing and plan of one we consider the best, as it can be made to accommodate from one dozen to five hundred fowls. The plan I send is 16 feet long by 8 feet wide at the bottom, and costs, by using one-inch matched boards, about $1 per foot. The present one will cost from $16 to $20, including *sash* doors and other fixtures. The engravings exhibit the plan so clearly that they require no explanation. J. RAMSEY. *Middletown, Ct.*



In connection with the above, we give the following from an English paper:—

First, of the roost and nest house. The floor should be sprinkled with ashes or loam or pulverized peat or fine charcoal, and the floor should be cleaned off every week.

"The yard should contain a grass plat, some fine gravel, slaked lime, dry ashes, and pure water. The nests should be lined with moss heath or straw. Evidently the Dorkings are the best breed; they will lay an average of 185 eggs each per annum. Fowls with black legs are best for roasting, while those with white legs are best for boiling. If you want them to sit early leave the eggs under them. Fowls in their native habits never lay more eggs than they can hatch. Remember that no success can be expected from poultry-keeping if their houses be damp, cold, unclean or badly ventilated; if their food does not approximate to that which they get in a state of nature, viz., a mixture of animal and vegetable food; if the water they drink be stagnant, the drainage of the manure heap, &c., or if the strongest and handsomest be not bred from.

Feeding Straw to Cattle, &c.

MESSRS. EDITORS—The great scarcity of fodder the past winter, and the loss and suffering occasioned by it, ought to serve as a caution to farmers against the unnecessary waste of their straw. I consider the practice of using straw for bedding, a bad one, especially where leaves or saw-dust can be obtained. The amount of straw used for bedding a cow, if fed properly with three or four ears of corn a day, would carry her handsomely through the winter. Good bright straw is about as palatable, and nearly as nutritious as hay. Then why waste it, by throwing it under their feet? Saw-dust, or leaves from the forest, is better than straw for bedding; and they absorb the liquids better, and add more to the stock of manure.

Another argument for feeding instead of wasting straw, especially in this section of country, is, that it is becoming very common for cows to slink their calves during the winter, and it is generally believed to be caused by the smut on the June grass, which is getting into nearly all the meadows in this part of the country. I have known of many large dairies nearly ruined in this way. Only one instance of this kind has ever happened in my dairy, and that was when I was feeding hay only. If we keep our stables warm, dry and clean, and use the currycomb freely, our stock will do well enough without bedding.

To prepare my corn for feeding, I fill a cask with it, in the ear, pour on boiling water, and let it stand 24 hours, when it will be soft, and easy of digestion; but it has occurred to me, that an apparatus might be constructed for steaming corn, which would be still better. I would like to get, through the Cultivator, some information on this subject. J. H. WOODBURN. *Gustavus, Ohio.*

Feeding Breeding Sows.

MESSRS. EDITORS—I see in the last Cultivator, an inquiry respecting breeding sows fed on beech nuts. It sometimes happens that pigs will die when fed on grain, especially corn, which I think is as bad as beech nuts. Corn or beech nuts are very binding in their nature, and make the animal very costive. Anything given to the sow, that will keep her bowels loose, will give you a litter of live pigs. Feed plenty of salt, and if you have a dairy, and "deacon your calves," feed them to the sows, and two or three of the first milkings of the cows. Breeding sows want a warm nest and plenty of exercise. OTSEGO.

Worms in the Heads of Sheep, &c.

Messrs. Editors—I notice in the *Country Gentleman*, an earnest inquiry about the preventive or cure of the grub in the sheep's head. Having had considerable experience with sheep, I have learned to think that the best and most sure preventive as well as cure for this difficulty, consists in the keeping, care and attention bestowed upon the flock at all seasons of the year.

I believe this insect or grub is natural to the sheep, though the seed or egg may be deposited by a fly. They can be found in the head of the sheep at all times, whether the animal is in good health or otherwise; and putting tar upon the noses or into the mouths of sheep, (though it is a healthy article to use in this way, and will no doubt promote the general health of the animal, as I have been convinced by its use in my own flock,) will not prevent the grub from generating in the head.

Let a flock of sheep be uniformly kept, throughout the year, in a good thriving condition, even if it requires grain or roots, or both, at certain seasons to do this, with as much pure salt as the appetite craves, and running water in the yards or pasture, and they will seldom die by the ravages of the grub or other diseases. Sheep are not so so hardy as mules, colts, or horned cattle, particularly our fine wooled races, and require a generous regularity of feed and keeping; and under this system of treatment they are no more liable to disease and mortality than other domestic animals.

By coming in contact with contagious diseases, such as the itch or scab, and rot foot, they will take the inoculation; but the remedy is at hand, and the disease easily cured if taken in its incipient stages. Particular care should be taken that the flock does not run down in flesh, late in autumn, when the grasses are rapidly losing their nutritious qualities, and becoming scant in quantity,—a time as we farmers say be twixt hay and grass—they should receive some grain to make up for the innutritions quality of the herbage —about one-half bushel shelled corn to each one hundred sheep, thrown upon the short grass in handfuls; they will pick up every kernel, and much good it will do them.

Again in the spring, is another season "betwixt hay and grass." After the days become warm, they lose their relish for dry hay, and the corn should again be scattered upon the grass, or its equivalent in roots; or a better way yet is, to feed a small quantity of grain daily through the winter, in troughs in the yards, say one gill of corn, or double this quantity of oats to each. In this way they will sustain themselves well in the yards two weeks later in the spring than by nothing but hay, and hay of poorer quality can be used than if no grain were fed; and all the better if a generous feed of roots once or twice each week is given through the winter.

But a little more about this magot in the head. Sheep kept in the way I have described, are prepared to sustain themselves against his attacks, formidable as he is. The system is strong and healthy, and with a cough and a violent sneeze, out they come from the nostrils, a regular full grown grub. I have often seen them in my sheep yards, and about the salt box and water trough. A sheep low in flesh and sickly, has not the strength to discharge or eject this insect from the head in the way nature designed, and death follows. There is another theory of the case, with some plausibility to support it. In a strong well-conditioned sheep, there must be more matter upon the inner surface or mucous membrane of the head, for the worm to feed upon, than there is with the poor sheep, and less likely he would be to attack the brain or vitality of the head, even if he were not ejected thro' the nostrils.

I occasionally lose a good sheep from some cause unknown. It may be the grub in the head, but I have no fears of its becoming an epidemic in my flock, nor do I think your inquirer need be alarmed if he keeps a large flock, and has lost but three by this disease; he probably keeps well, or his loss would have been greater. I have known from one-fourth to one-half of flocks of one hundred or over, die off with this disease in a single winter, and have heard the wail and complaint of the owners about the incurability of this dreaded malady, when the poor animals were so low in condition, for the want of care and feed, that there were not left vigor and vitality enough in them, either to eject the grub from, or keep him in the head, without furnishing their brains for food. Writing upon this subject brings to mind a remark of a shrewd neighbor who has gone to a better world, who would insist that the owners of these flocks were mistaken in the name of the disease; says he, "it is not the *grub in the head*, that kills these sheep—it is the *straw in the belly*." I was inclined to adopt his opinion. J. W. Colburne. *Springfield, Vt., May* 15,1854.

We thank Mr. Colburne for the above. It should be carefully read and remembered by all farmers whose sheep are troubled with the disease alluded to. In the *Prairie Farmer* for May, we find an interesting article on this subject, which we shall copy hereafter.

Docking Lambs.

In the October number of last year, "A Farmer" objects to the practice of docking lambs—thinks it a barbarous practice. I am as far from giving unnecessary pain to animals, perhaps, as he or any other individual, but I have yet to learn why docking is a more unnecessary or barbarous custom then castrating or butchering, either of which I have never heard objected to.

Should "A Farmer" follow the business of rearing lambs, especially from Merinoes, he would probably become satisfied in time that it is necessary and profitable to have his breeding ewes docked short, to keep them clean and insure lambs.

I have a more convenient method I think of stopping the blood than Mr. Jewett's, which consists in the application of a small quantity of green arsmart bruised and applied immediately to the wound, which is a powerful styptic, contracting the ends of the ruptured blood vessels and stopping the flow of blood instantly.

The weed arsmart, smart weed, &c., alluded to above, is called by some botanists Polygonum punctatum, by others Aqua piper. Chas. Babcock.

The Poultry Yard.

REMEDY FOR THE GAPES IN FOWLS.

MESSRS. EDITORS—I have had five or six broods of chickens hatched this spring, every one of which has died. When from two to three weeks old, they were taken with the *gapes*, and after a few days, despite change of food, and such other remedies as were recommended, they invariably expired. Pills of lard rolled in pepper, were confidently recommended, but they did no good. Black and red pepper were both tried. Indian meal mixed with onion water, was of no avail. Wet food, dry food, vegetable and animal food, did no good whatever. My neighbor who lives but a few hundred feet from me, is not troubled at all. Last evening I called upon a gentleman who is a very successful raiser of poultry, and communicated to him my sad experience, and desired to know the cause of the complaint. That, said he, is what *I* should like to know, but if you desire to know the *remedy*, come with me into the fowl yard and I will show you how to cure the disease. There I found he kept a clam-shell filled with spirits of turpentine and a feather stripped of the barb. Catching a chicken which gave evidence of illness, while another person held it, he placed the fore finger of his left hand under the chick's bill or throat, which caused it to open its mouth, then caught and held the tongue (which was drawn well forward) by the thumb nail of the same (left) hand; then dipping the feather in the turpentine he thrust it down the chick's windpipe, giving it a twist; as soon as the feather was withdrawn, the chick coughed and threw up what looked like a string of clotted blood about an inch long and as thick as a darning needle. Upon examining it with a magnifying glass, this clotted mass was found to consist of several worms of an eel-like shape. The gentleman assured me that the presence of these worms in the windpipe was the cause of the gape, and his remedy was an effectual one. He says that the operation seldom required to be performed the second time on the same chick, and that he had acquired such skill in the performance of the operation that very rarely was a chick injured by it. In this case he was not more than half a minute and the bird ran off when freed, apparently uninjured.

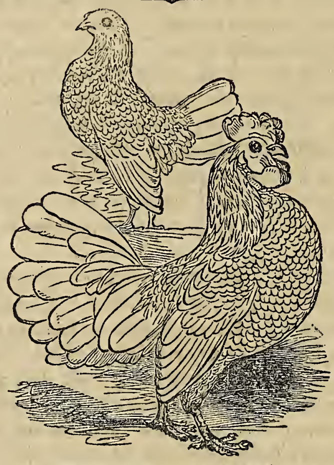
To my mind it is proved that the death of my chickens was caused by these parasites, but the remedy in the hands of any but a skillful operator would be severe if not barbarous, and this case forcibly illustrates the old saw, "an ounce of preventive is better than a pound of cure." Now can you or any of your readers tell how these parasites are produced and what treatment is necessary to prevent their formation. It is very clear that any medicine powerful enough to kill the worm in the windpipe, would kill the chicken first. Yours respectfully, GEO. W. SAVAGE. *Rahway. N. J.*

The insect alluded to above, was figured and accurately described by Mr. C. E. MORTON, of Orange county, in *The Cultivator* for 1844, p. 305. We copy Mr. MORTON's remarks on preventing the disease,

There is one fact connected with this disease—that it is only old hen-roosts that are subject to it; and I am of opinion that where it prevails, if the chicken houses and coops were kept clean and frequently whitewashed with thin whitewash, with plenty of salt or brine mixed with it, and those chickens that take the disease, operated on and cured, or if they should die, have them burned up or so destroyed that the eggs of the worms would not hatch out, that the disease would be eradicated.

I am also satisfied that the chicken has not the disease when first hatched; several broods that I carried and kept at a distance from the chicken house where the disease prevailed, were entirely exempt. And chickens hatched from my eggs where they had never been troubled with the disease. were perfectly free from it; and a neighbor of mine who built in the wood half a mile from any dwelling, and has raised fowls for six or seven years past, and has frequently set my eggs has never had the gapes among his chickens.

With my first broods of chickens, there was not one escaped the gapes. But all that have been hatched since I had the chicken-house and coops well whitewashed inside and out, with thin whitewash, with plenty of brine in it, and kept clean, have been exempt from the disease, with occasionally an exception of one or two chickens out of a brood.



SEBRIGHT BANTAMS.

The Bantams are the least in size of all the gallinaceous tribe. There are many varieties, some of which are very beautiful birds. Among the handsomest are those known as Sebright bantams, which are thus described by Martin:

" It is very small, with unfeathered legs, and a rose comb and short hackles. The plumage is gold or silver spangled, every feather being of a golden orange, with a glossy jet black margin; the cocks have the tail folded like that of a hen, without the usual recurved drooping sickle feathers, or rather these feathers are abbreviated, straight or nearly so, and broader than usual. Hence the term *hen-cocks* often applied to them. But although the sickle feathers are thus modified, no bird possesses higher courage, or a more gallant carriage. The attitude of the cock is indeed singularly proud, and we have often seen one of them bear himself so haughtily, that his head, thrown back as if in disdain, has nearly touched the two upper feathers of his tail. Half-bred birds of this kind are not uncommon, but birds of the pure breed are not to be obtained without trouble and expense; indeed, some years ago, it was almost impossible to procure either a fowl or an egg."

A box 8 inches by 8-4 inches square, and 8 inches deep, will contain one peck.

Answers to Inquiries.

Manure Cellars.—(*W. F. Brand*, Emmerton, Md.) We have never been strongly in favor of cellars as depositories of manure. Unless on sidling ground, so as to admit of opening level on one side, there would be great difficulty in shoveling out from them two or three hundred tons annually. Even if on a level, the manure wagon would have to be "backed" in, both in loading and in depositing any turf, peat, or other substance used for intermixture. Besides these objections, cellar room is too valuable for other purposes, while a contiguous yard will answer equally well for manure, and prove much more convenient, for loading and unloading, and for the approach and egress of teams. We should much prefer making large piles of compost in the yard, by depositing successive layers of turf from fence corners, &c., with the manure; and if necessary all this may be done under a broad and high open shed, to protect from the washing of rains, although even this is not necessary if the turf, peat, loam, &c., are largely used in the stratification and covering of the heap.

Reapers and Mowers.—(*H. Baldwin*, Hudson; *E. J. Horan*, Quebec; and others.) A very uneven surface cannot be mowed with a mowing machine—nor stumpy ground, unless the machine can pass round the stumps. Ketchum's mower is never used as a reaper. Our correspondents will find such answers as we can give, to the rest of their inquiries, in the 64th No. of the Country Gentleman, and in the Cultivator for May, p. 162.

Clover.—As you seem ever ready to answer inquiries, I wish to inqure the best method of treating clover, to insure a vigorous growth of the plant. Some contend that clover which has been sowed in the spring, should be pastured off as soon as the grain is harvested in summer, and that clover intended for pasture, should not be suffered to become large in the spring, before turning in, as frequent cropping insures a more vigorous growth of the root. Others maintain that clover sowed in the spring, should not be pastured in the fall, or at least not till the approach of winter when the plant has ceased growing, and that it is better not to pasture clover in the spring until it is nearly or quite in blossom—that by keeping a short top the growth of the root is retarded. Which is right? H. J. P. *New Paltz Landing, April* 15.

The growth of all plants is retarded by removing the leaves, when the root remains entire. The growth of the root and stem always vitally depends on a large and healthy foliage. Hence, the roots of clover will not grow so large when cropped close. Actual and accurate experiment has confirmed this theory—roots with fully grown tops when carefully dug up being found decidedly larger than those kept cut down.

"Terra-Culture."—(S. W. Cowles, *Unionville.*)—This is a term applied without any peculiar appropriateness, to a particular theory of cultivation, having no claims to originality, but held as a secret, by a man by the name of Comstock. We have been informed that the theory consists chiefly in "following nature," by sowing seed without covering, planting trees shallow, discarding pruning and grafting, &c. Trees scatter their seeds in forests, in the shade, to be covered with falling leaves; but in open ground a covering of soil must be substituted for the shade and newly forming mould. Hence this theory will not apply to field culture, any further than it has been known from time immemorial by good cultivators, that burying seeds too deeply will prevent their germination. Every skilful fruit-raiser knows that trees should not be set too deeply in the soil, but that the depth must vary with circumstances, size of tree, lightness or moisture of the soil, &c. In short, the theory is a blundering mixture of truth and error, without discrimination between the two, with a claim to originality without any foundation.

Parsneps and Butter.—A correspondent writes in a late letter for information on the subject of the bad effects of parsneps on butter making, and furnishes the following facts:—"Our nearest neighbors churned the other day, I believe nearly all day, but the cream produced no butter; and on the next day a further trial was made with no better success. They then went into the pasture and found parsneps—seed having scattered from the garden—and their cows having eaten them, they ascribe their failure in the dairy. They assure me that in Clinton county whence they came, this plant was known to produce similar effects. Our cows feed in a lot adjoining, where there are no parsneps, and we have had to churn scarcely five minutes for butter. Have any of the readers of the Country Gentleman observed any thing corroborating this statement?"

Destructive Insect.—Our correspondent J. Bingham, of Hudson, N. Y., mentions an insect found very abundantly on *elm* trees at that place; and proving destructive to the foliage, and inquires for a remedy. The proposed insertion of any poisonous substance by boring into the tree, if producing any effect, would probably injure or kill the tree, judging from other experiments. Mineral substances which prove poisonous to animals, are generally destructive to plants. Vegetable poison affects the former, but not the latter. We cannot suggest a remedy in this case, as we know nothing of the character of the insect, nor even whether it is a larva or perfect insect. The pear insect we have no knowledge of.

Cisterns for Farm Animals.—"Will rain water from a cistern kept under ground, answer for general purposes for *feeding and watering horses, hogs and cattle?* S. W. C."

Good cleanly kept cisterns of this character, will afford good water for such purposes, and which we have long been in the practice of using without any detriment.

Gapes in Chickens.—"A subscriber," will find his inquiry on this subject, fully answered in the 73d No. of the Co. Gent. and in the Cultivator for July.

A Subscriber, *New York.*—You will find an answer to your inquiry about your ice-house in the June Cultivator. It came too late for the May no. If you had furnished your address, we should have written to you promptly.

Notes for the Month.

Farm Implements, and the Principles of their Construction and Use; an Elementary and Familiar Treatise on Mechanics, and on Natural Philosophy generally, as applied to the ordinary Practices of Agriculture. With 200 engraved Illustrations. By J. J. Thomas. Harper & Brothers, New-York.

This is a beautiful volume of 268 pages, which came to hand too late for suitable notice this week. We shall hereafter notice it at length. In the meantime we copy the following from the New-York Evangelist of last week.

> **Farm Implements.**—An essay prepared for the New-York State Agr. Society, with this title, has been issued, which has a more than ordinary value. It is a practical elucidation of the principles of Natural Philosophy brought into use by the various farming implements and agricultural machinery now in vogue. The author is both farmer and scholar; and he has gone into an explanation of the philosophy of all the every-day implements of the farm, with the design of making it familiar to the commonest understanding. The advantages of agricultural machinery could in no other way be so clearly demonstrated. It abounds in illustrations, and is written in a simple, straightforward style, adapted to impart dignity and intelligence to this earliest and noblest of human callings. (Harper & Brothers.)

☞ We desire to call the attention of our readers to the valuable communication published this week from our correspondent, Mr. S. W. Johnson, who is, we are happy to learn, now prosecuting his studies under the celebrated Liebig, at Munich. His paper will be found exceedingly interesting and full of information. We should be glad if any of our scientific men would take the trouble to perform some of the experiments which he suggests, and the importance of which will be apparent to every reader of his careful and able reasoning. We trust ere long the theory and practice of agriculture will both receive that minute study and accurate investigation which they now need so much, and which can alone make them accord in increasing the profits and elevating the social position of the farmer. The obstacles now in the way of this much to-be desired result do not consist, so much as formerly, in the farmer's opposition to the application of science to his craft; they are the same that impede the first steps of progress in every art,—the safe teachings of science are carried to unsafe extremes; interested quackery and dishonest charlatanism rush forward for gain, until the true aim of science is forgotten and reproach is brought upon its teachings.

Importation of Silesian Sheep.—We are happy to be able to announce that Mr. Geo. W. Campbell of Westminster West, Vt., and Mr. Chamberlain of Red Hook, have just received in good condition 60 Silesian Ewes and 13 Bucks, by the steamer Washington. Mr. Wm. H. Ladd of Richmond, O., has, as we learn, taken an equal interest with Messrs. Campbell and Chamberlain in this and future importations. He is an excellent judge of animals; and it is his opinion that the Silesian is the breed of sheep best adapted to the wants of the American farmer. He contemplates soon making a visit to Silesia for the selection and importation of the best specimens of the breed to be obtained.

Butter from an Ayrshire Yearling.—An Ayrshire Heifer belonging to the herd of E. P. Prentice, Esq. of Mount Hope, only seventeen months and three days old, and weighing herself 550 lbs. produced, during the last week in May, 9¾ lbs. of butter. She had nothing but the ordinary grass feed of the other cattle.

Transactions of the Royal Hawaiian Ag. Society.—We are indebted to J. S. Gower, of Makawao, East Maui, for a copy of the Transactions of the Royal Agricultural Society of the Sandwich Islands. It is a neatly printed octavo of 170 pages, and is filled with the reports of the officers and committees of the society, its list of premiums, and the address of the President at the last annual meeting, June, 1853. The past year is represented to have been one of comparative agricultural prosperity, and the reports show that praiseworthy efforts are making to render the cultivation of the soil a more safe and profitable calling. The produce of sugar on these islands amounted the last year to $100,000, and the crop for the coming year promises to be twice as large. Still, says the secretary, "we have thousands of acres of first-rate cane lands now vacant and idle, which with capital, enterprise, and labor, are capable of producing enough to pay for all the goods we import." The raising of wheat is receiving attention, and it is hoped that bread-stuffs will soon be raised in sufficient quantity to supply the home demand. The cultivation of Indian corn and potatoes is carried on to a greater extent than ever before, and the experience of every year is teaching the natives how to obviate the disadvantages of their soil and seasons, and secure more abundant crops. The culture of Fruit, particularly of the vine, is urged as adapted to the soil of these lands, and experiments are making in that direction. Animals of the best breeds, horses, cattle, sheep and swine, have been imported to a limited extent, and in short, those who have charge of the society, seem determined to leave no stone unturned in the way of improvement. These efforts are the more praiseworthy from the fact that there are many natural, as well as artificial difficulties to be overcome in elevating the character of the agriculture of these islands. The results, thus far, are most hopeful, and we trust that the good work so spiritedly commenced will be persevered in with continued energy.

Old State Hall.—The Legislature has appropriated $25,000, for the enlargement and re-modeling of the old State Hall, occupied by the Geological Museum and the State Ag. Society. The improvements contemplated are to be under the charge of the Commissioners of the Land Office, and will we trust, be completed soon. They will add increased attractions and value to the extensive collection of Geological and other specimens, as well as the long needed facilities for the Museum of the State Ag. Society.

Adulteration of Guano.—It needs no argument to show that farmers who purchase concentrated manures, should procure them of manufacturers of strict integrity and veracity. A case in illustration recently occurred in England, where a dealer at Exeter had bought largely of merchants at Bristol, an article which proved bad, and in an action at law to recover damages, it was proved that the merchants had sent the dealer a false and fraudulent analysis, forged for the occasion; and their foreman stated on examination, that loam, sand, turf-ashes, and salt, were largely used in the manufacture of this artificial guano; that the various ingredients were mixed with a shovel, and that it took about 10 hours to prepare 50 tons. Wonder if these manufacturers placed the notice "*no admittance*," over the door?

☞ We regret to hear that the Livingston Co. Importing Association met with a very heavy loss on the passage of their stock from Liverpool. They were shipped on a sail vessel, and twelve head, just one-half the number purchased, died on the voyage. Those that were brought safely through have arrived at Geneseo, and are doing well. These losses on shipboard are a very serious drawback to the importation of cattle.

Cotswold Sheep.—A correspondent wishes to procure a pure Cotswold or Oxfordshire buck, not from the flocks of either Col. Ware of Virginia or Messrs. Reybold of Delaware. He wants it, we infer, to infuse new blood into sheep from those flocks. If any of our subscribers have such animals to dispose of, they will please inform us.

Minnesota.—A correspondent at St. Paul, under date of June 3d says—"There is, I apprehend, no country where all the requisite qualifications for a farmer are so abundant as in Minnesota, including good prairie soil, with wood and water for the most part contiguous, together with a fine healthy climate and good present and prospective markets. Here in one word are combined all the natural elements by which any man may develop and ennoble himself up to the high standard of the country gentleman as taught in your paper. More especially will this apply to the Cannon river country, which is somewhat inland on the west side of the Mississippi river, it being from fifteen to forty miles from the different landings on that river. I am induced to believe, from personal observation and otherwise, that the Cannon river country is by far the best portion of the territory, or indeed of all the North-West, for agricultural purposes."

Cleaning Wall Paper.—Neat housekeepers are familiar with the practice of cleaning wall paper by rubbing it with pieces of bread; but a correspondent of the Ohio Cultivator who signs herself "*Sun Bonnet*," says she can clean it "just as nice, with less than half the time and labor" by enclosing a quantity of wheat bran in a bag of *thin open flannel*, and rubbing the paper with this, shaking it up occasionally to keep the surface fresh. If flannel cannot be readily had, *strainer-cloth* will answer. If needful, it may be attached to a pole and used on a high ceiling. Badly smoked paper may be greatly improved by this means.

Wheat Crop in Ohio.—Extract of a letter from a subscriber at Zanesville, dated June 10.—"This Zanesville is the Rochester of the West for Milling, consequently the wheat crop is with us a great staple. The prospect for the coming crop is not by any means good, much of the wheat will be fit to harvest by 1st July; the Fly has destroyed much; the queer weather of last winter much more; and now the Midge, (or as they call it here the Red weevil,) has commenced its ravages. This is its third season with us. In short there will scarcely be more than a half crop in this and the neighboring counties from which our five mills draw their supplies. This is no croaking, but a reliable opinion."

Butter from an Alderney Cow.—It appears by a statement in the Boston Cultivator that from the milk of an Alderney cow, called "Flora," 5 years old in April last, there was made from the 11th May 1853 to the 26th April 1854, the extraordinary amount of 511¾ pounds of butter. Flora is owned by Thos. Motley, Jr., Jamaica Plains. Mr. M. says—'From Nov. 8th till the time we stopped making butter, she had about a half bushel of either ruta bagas or carrots, and two quarts of corn and cob meal per day, in addition to hay, or most of the time oat straw fodder. The last 3 months it took almost exactly five quarts of mik to make one pound of butter. She is to calve June 10, 1854."

Female Equestrianism.—At the next exhibition of the Allegheny Co. (Pa.) Ag. Society, a horse valued at $200, is to be awarded for the best display in this much-to-be-praised accomplishment.

How to Manage Stowell Corn.—The Ohio Cultivator gives the following method of treating this corn so as to make it good for winter use—the old mode of trying to keep it green in the husk having generally proved a failure. Gather the ears when in full milk, and strip off all but a thin covering of husk; lay these in a moderately heated oven or cooking stove, long enough to scald or stiffen the milk, when the grains are shaved off and kept in a close bag or canister. Boil in the usual way when wanted for use—thus treated the corn is said to be very fine.

Sales of Stock.—The *Vermont Watchman* states that A. L. **Bingham**, of West Cornwall, Addison Co, has made the following sales since the 10th of September, last:

293 bucks and ewes,	$35,127,50
Buck lambs sold,	1.142,00
French sheep.	7,033.00
11 cattle.	705.00
10 horses and colts.	1,185,00
Total sales.	$45,192,50

He has on hand 375 French Merino sheep, 40 head of cattle and 9 horses.

Sore Shoulders in Horses.

In reply to an inquiry as to the best treatment for a horse of tender skin, whose shoulders get chafed by the collar from the shortest work, the editor of the N. Brit. Agriculturist gives some directions, of which the following is the sum and substance. He says, when a sore is actually formed in consequence of chafing by the collar, the horse should either be laid off work, or the collar stuffing should be removed so as to prevent pressure on the wound. A mixture containing half an ounce of sulphate of zinc to a quart of water should be continually applied by means of a soft rag saturated with the mixture and laid upon the sore. This plan of keeping the part constantly wet, tends to abate inflammation and soreness, and rapidly induces the healing process. If the horse cannot be allowed to rest, the collar must be eased as before directed, the sore well bathed with water, and then dressed with the above mixture before going to work, and on coming from it. If the skin be unbroken and merely tender or somewhat thickened, and perhaps rather knotty, a strong solution of common salt in water is a very excellent application. It may be applied by means of a rag saturated in the solution and laid upon the part affected. The same treatment is applicable to bruises by the saddle as well as to those by the collar; it being essential to the cure in both cases that the collar or saddle should be made to fit properly.

The strong solution of salt may do something towards toughening the skin where it is tender, and easily chafed or bruised, but we should expect a still better effect from a strong decoction of white oak bark, or a solution of tannin in water. By the application of either of these before the skin has actually become broken, or as soon as any signs of tenderness make their appearance, galls and sores from saddle or collar may usually be prevented. A few trials of the oak-bark decoction with a little alum, as well as the property it has to tan and toughen, incline us to expect more from it than from a solution of common salt. *

Ayrshire Cattle.

Messrs. Editors—In answer to an inquiry in the *Country Gentleman* of June 1st, page 345, by Mr. James H. Mattison, Oberlin, O., I would state briefly, that I consider the Ayrshire breed of cattle equal, if not superior, to any with which I have had experience; which includes Durhams, Devons, and others. If good dairy cows and working oxen, are what a person wishes, with a fair tendency to fatten, I claim that a man may obtain with more certainty, what he wishes, with them, than with any other one breed. Such is my opinion, confirmed by experience.

I will give an outline of a bull, which I procured of an importer of this breed of stock, three years since, and have now: Carcass, straight, well made and compact. Chest, deep, wide and full, denoting a good constitution. When standing, stands firmly on all four. Neck, tapers from the shoulder toward the head, free from all loose skin hanging under the jaws. Horns, fine, where they start from the head, making a graceful curve, standing a little elevated from a horizontal line with the back. Head, fine, with a mild, pleasant and expressive eye. Constitution, strong; disposition, contented; skin, soft, firm, and well covered with a good thick coat of hair. Color, a light cherry red. Stock good, thrives well on ordinary keep; but does better on good keep.

Should your correspondent wish to get this, he can write me. Calvin Allyn. *Uncasville, Conn.*

O. C. D. informs us that Mr. Mattison will find such a bull as he wants in the possession of E. Douglass, Claridon, Geauga Co., O. He is a cross of the Devon and Durham.

Training Steers.

Mr. Tucker—My mode of breaking steers is first, to gentle them by feeding them from the hand, with short corn, roots, or even good hay. Secondly, I yoke them in a good yard, as gently as possible, leaving them to stand or walk about as they choose, for several hours, and then unyoke them, taking great care not to let them jump from the yoke, or become frightened at it. This should be done several times, before trying to drive them while in yoke at all. Thirdly, I use a halter, and short whip, and break each separately to walk beside the driver; and to turn to the right and left, by the motion of the whip, and sound of the voice. Patience and gentleness should be used at all times. If the steer be stubborn, by peruasive means he will soon subject himself to the will of the driver. After this I drive them together in the yoke, using a halter on the left hand steer, and a longer whip than before, without any draft at first; afterward with a light draft, such as they can pull without much effort, increasing the load as they become accustomed to use their strength. The halter may be dispensed with as soon as they learn the motions of the whip. They may be broke to work well to a harrow, lead of a team, &c. in one week, by spending 3 or 4 hours with them each day, in the above manner; after which they can be used to a cart, plow, or any thing desired.

I have broken steers which were four years old, (without ever having been handled at all, and which were so wild as to require stratagem to catch them with a rope,) to work well to a wagon in one week, by the above practice. M. S. Bidwell. *Occoquan, Va.*

Cotswold Sheep.

Messrs. Editors—I would state in regard to Sheep, that I have for some time been anxious to get a small flock of sheep of the right sort for family use, as well as something that might be profitable. I obtained in the month of April, 1853, two half bred Cotswold ewes. The May following they brought forth four lambs. At five months old, I sold one, of the same value of the others. for $5. The first of the present month, I had an addition of four, (by the way twins are peculiar to this breed,) so the increase from April 53 to April 54, is seven, and sold one—all nice—five of them having heavy, very heavy, fleeces on their backs of long medium but not coarse wool. It is my decided opinion that the Cotswold will be found to be the most profitable, for those who wish to stock their farms with sheep. L. Griswold. *Milton, Ct.*

Warts on Cattle.

Messrs. Editors—In the Cultivator for this month, you answer an inquirer about Warts on Cattle. Thinking it may be of some service, I cut out the enclosed slip from the N. E. Farmer, which I sent as the result of my experience in curing warts on cattle. George Cruikshank. *Swampscot, April*, 1824.

To Cure Warts on Cows.—In the *Farmer*, I noticed a subscriber answers my inquiry, "What will cure warts on the teats of cows ?" My remedy is as follows: I tried walnut-shells on the shoulder of a cow, where the warts covered a place six inches square. I took the walnuts, cut the shells off, and pounded them (the shells) up so that I could press the juice out, and rubbed the warts with my hand and juice for about ten minutes every day for a week, when the warts began to be quite loose, so that you could pick them off easily. Before applying the juice, I rubbed the warts so as to take all off that I could; the last time I put on the juice, I rubbed the warts till the blood came; now the warts are all gone, and the place looks as if none had been there.

Having given this a fair trial, and found it to prove successful, I send you the result, for the information of all who read the *New England Farmer*, if you think it worthy of a place in your paper.

How to Build Cisterns.

Messrs. Editors—In a late no. of your paper a subscriber wishes to know the most approved method of making cisterns. Our village has about 800 inhabitants, and we have about 50 cisterns, although the stream called Big Spring, passes the east end of our main street. The mode is simely this: Dig a hole in the ground from 6 to 9 feet deep, and 6 feet in diameter at the surface, and lessening as you go down, representing the large end of an egg as near as may be, only the bottom to be flat. If the ground is all clay, it can be dug so smooth and even all round that the brick may lay close against the bank, and a very little mortar will make them firm, so that the weight of water when full, will not allow them to give, and crack the cement. When the ground is rocky, and blasting has to be done in order to get the required depth, of course the pit will be irregular in its sides, and the brick work should be carried up, of the above shape, and either stone and lime mortar used for the backing, or clay pounded in behind the brick, just so firmly as to support them. The plan that is pursued is to lay three courses of brick, then mason or clay as high as the rise, or nearly so. The bottom is usually laid first. When within about two feet of the surface, commence to turn the arch, which is less of a job than would be thought until tried. In the centre of the arch is a box 30 by 18 inches, and from 12 to 14 deep, to put in the pump, clean when necessary, &c., &c.

The cost from 6 to 9 dollars for mason, and the cost of digging pit, sand, lime and from 1000 to 2000 brick according to size, in clay, 20 hhds. $20—rock, 20 hhds. $30—cement $3,50 per barrel. Rosendale is used here. Any bricklayer can do the work; the brick laid in good lime and sand mortar, and when dried a few days, cement by mixing one-third clean sand washed, and two-thirds cement, to the consistency of plasterer's mortar, and but a little at a time, or it will set before it can be put on. If the brick work has got dry, it is best to wash it down, to remove the dust, so that the cement may adhere closely. The bricks ought to be hard and well burnt Yours &c., Wm. Woodburn. *Newville, Cumberland Co. Penn.*

☞ We understand that Mr. C D. Beut of Hannibal, Oswego Co., has purchased from the herd of P. M. Harwood, Esq., Auburn, a Boar Pig, got by the imported Suffolk Boar which Mr. S. exhibited at the Ag. Soc'y's Show, in Feb. last. Mr. Beut has also lately bought a pig from Mr. C. D. Clark's sow, whose portrait we gave in a late no.

☞ B. V. French Esq., of Braintree, Mass., will please accept our thanks for copies of the "Agriculture of Massachusetts," "Proceedings of the Mass. Board of Agriculture for 1852," "Transactions of the Middlesex Ag. Society for 1853," and the programme of "the 6th annual Cattle Show and Fair of the Norfork Ag. Society," to be held at Dedham on the 26th and 27th of Sept. next.

Green Co. Fair.—This Fair is to be held at Catskill for the first time, this year, and the citizens of Catskill promise that it shall be one of the best ever held in the county.

Game Fowls.—In answer to an inquiry in our last No., we are informed that Mr. T. C. Abrahams, of West Troy, N. Y., has all the varieties of this breed of poultry. Mr. A. promises us a description of his different varieties, several of which he has recently received from Europe, and among them are some from the Earl of Derby, received within the past three weeks.

Uncle Sam's Farm Fence,

BY A. D. MILNE,

WITH ILLUSTRATIONS BY N. ORR.

TO the man who has flesh in his heart, we say, "*Read the book*;" To the woman who is the mother of living children, we say with emphasis, "Read the Book;" And to *all* who regard the moral dignity of man,—the purity of woman—the salvation and peace of poor suffering humanity, we again say, "READ UNCLE SAM'S FARM FENCE!"

This very popular Book was published *Wednesday, May 10th*, and the whole of the First Edition was sold before *Saturday Night!*

The *Second Edition* was published *Wednesday, May 17th*, and nearly all sold in One Week!

We have just issued

The Third Edition!

and are now able to supply all orders.

Price, 75 Cents, in neat cloth binding,

Sent by mail free of postage. For sale by Booksellers generally. B. SHEPARD & CO., Publishers.
June 22—w3tm1t 152 Fulton-St, New-York.

Farmer Wanted.

THE subscriber wishes to employ a Farmer and his Wife, who can come well recommended as to capacity and moral character. I wish them without family, or of such an age as can be employed as help on my farm.
Address E. D. HUNTER.
June 8—w4tm1t* New Rochelle, Westchester Co., N. Y.

Field Turnip and Beet Seeds.

THE following varieties of the very finest qualities and of either American or European growth; the latter being from the most reliable growers, and *warranted not to be surpassed in quality by any other importations.*

TURNIPS—	Purple top Ruta Baga, ...	50	cents	per lb.
	Skirving's Improved, ...	50	"	"
	do do (Am. Seed,)..	75	"	"
	Dale's Hybrid, ...	75	"	"
	Yellow Aberdeen, ...	75	"	"
	Large White Flat, ...	50	"	"
	Large White Norfolk, ...	50	"	"
	Improved White Strap Leaf, flat	75	'	"
	Improved Red Top, flat, ...	75	"	"
	English Rape, or Cole, ...	25	"	quart.
BEETS—	White Silesia, or French Sugar, ..	50	"	lb.
	Yellow German Sugar, ...	50	"	"
	Long Red Mangel Wurtzel, ...	50	"	"
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J. M. THORBURN & CO.,
May 25—w3tm2t 15 John st., New-York

Sweet Corn for Fodder.

STOWELL'S EVERGREEN, and the recently introduced OLD COLONY SWEET, are the best and by far the most productive varieties to sow broadcast or in drills, to cut for *Green Fodder*; the stalks, (nearly the whole of which are edible,) attaining a much larger growth, more profusely furnished with leaves, and being more nutritious than other sorts. May be sown as late as July with advantage.

Price, 25 cents a Quart, or $5 per Bushel.

May 25—w3tm1t J. M. THORBURN & CO.,
15 John-st., New-York.

Mower and Reaper.

Forbush's New Improved Combined Reaper and Mower.

THE above patent machine is now permanently established, and its entire success as a Combined Reaper and Mower proved beyond all doubt. This machine will be warranted to be made in a workmanlike manner and of the best materials, and capable of cutting from ten to fifteen acres of grass or grain per day, and in all respects to do the work as well and as easy for the horses as any other machine in the country.

Price of Combined Reaper and Mower, ...	$135
" Mower, ...	115

For sale by LONGETT & GRIFFING,
No. 25 Cliff st., New-York.
April 6—w2ta&4tmay—m3t

Albany Agricultural Works,

Warehouse and Seed Store, 369 *and* 371 *Broadway, Albany.*

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"*Emery's Patent Changeable Railroad Horse Powers.*"
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.
Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.

RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co.

Hallenbeck's Mowing Machine.

THE subscriber having perfected and tested his new and improved Mowing Machine, now offers it to the public for the coming season, confident that it will not fail to give perfect satisfaction. It is simple in construction, light of draft, and perfectly free from clogging. They are built at present for me by Deering & Dederick, corner of Bleecker and Franklin streets, Albany, N. Y. A large number will be made, and are offered to the public, warranted to operate well and to give satisfaction. Persons intending to buy mowing machines will find it to their advantage to examine mine before purchasing.

For further particulars, address the subscriber at Albany, N. Y. MARTIN HALLENBECK.
Feb. 2—w&mtf

Great Sale of Ayrshire Cattle.

MR. ROBERT GRAY, *Oak-Park, Fredericton New-Brunswick*, will sell at auction on Friday, 21st July, 1854, at 11 o'clock forenoon, at his farm, his surplus stock of pure bred Ayrshire cattle, consisting of—

1 Two year old bull,
1 Three year old bull,
10 Heifer and bull calves,
6 Yearling heifers,
4 Two year old heifers,
12 Cows of various ages.

Mr. Gray came to this country from Ayrshire, five years ago, with a selected stock of choice Aryshire cattle, from which the above have been bred. They will be found equal to anything that could be imported, and have the advantage of being acclimated. The bulls and young stock are descended from the celebrated bull "Jock the Laird," for which three hundred guineas were paid. All are warranted pure.

A proportion of each lot will be sold without reserve, and the whole if there is sufficient competition.

Catalogues with full pedigrees will be furnished previous to the sale. April 27—w,nos.69,70,78,79,80,81—m2t

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.

March 1—mtf GEO. H. BARR & Co.

Cultivation of Tobacco.

A PRACTICAL TREATISE on growing Tobacco in the Northern States, just published. Price, $25 cts.

E. H. BABCOCK & CO.,
May 4—m3t Syracuse, N Y.

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HICKOK'S CIDER MILL AND PRESS—This mill and press is conceded, by all who have seen and used it, to be the best—simple in construction, portable, weighing 275 lbs., and not liable to get out of order. Warranted to work well, and give satisfaction. The first premiums of the American Institute and Crystal Palace have been awarded to this machine. Price, $40. Drawings and descriptions will be sent by addressing the sole agents,

LONGETT & GRIFFING,
25 Cliff-street, New-York.
May 1—m5t—w2tinM,Ju,J,A,&4tinS

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb. 1—m1y Braintree, Mass.

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my11—w&m3m

North River Agricultural Warehouse and Seed Store.

No. 53 Cortland-Street, New-York,

WHERE may be found a large and complete assortment of the best and latest improved Agricultural and Horticultural Implements, Field and Garden Seeds, Fruit and Ornamental Trees, Fertilizers of all kinds, &c., &c.

March 1—mtf GEO. H. BARR & Co.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequaled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine—also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shippping or using on plantation, arm or garden. JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette. Superphosphate of Lime, and other fertilisers. Jan 1, 1853—m&wtf.

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WE are receiving our stock of Peruvian Guano for summer and fall supply, per ships Northern Crown, Lavanter and Antelope—are now prepared to supply all that may be in want of this valuable manure, and request early application. Price, $55 per ton of 2,000 lbs. When taken in lots of Five Tons and upwards, a discount will be made.

There are various substances now offering in this market for Peruvian Guano. To avoid imposition, be particular to observe that the genuine Guano has branded on each bag.

No 1, PERUVIAN GUANO,

Imported by F. Barreda Brothers—LONGETT & GRIFFING, State Agricultural Warehouse, No. 25 Cliff street, New-York. June 1—w4tmtf

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by

GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

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THE subscribers are now prepared to furnish Bone Dust by the barrel or ton in its pure and most efficient state, ground to any desired fineness. GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

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Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette. of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality. at the lowest market price. GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Bone Dust.

BONE SAWINGS, OR MEAL, a very superior article, warranted pure. Price, $2.75 per barrel. Bone Dust, ground quite fine, $2.37 per barrel.

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Ap. 20—m3tw2m No. 25 Cliff-st., near Fulton, New-York

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MANUFACTURERS OF

CHURCH AND FANCY VANES,

West-Bridgewater, Mass.

A great variety of patterns manufactured, such as Horses, Oxen, Roosters, Plows, Cows, &c.

May 18—w4tm2t

Albany Tile Works,

Corner of Patroon and Knox-Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices suitable for land drainage, always on hand in large or small quantities of the first quality, delivered at the docks and railroad depots free of cartage:

	Horse-Shoe Tile.	
4½ inch caliber,	$18	per 1000 feet.
3½ do	15	do
2½ do	12	do
	Sole Tile or Pipe.	
3 inch caliber,	$18	per 1000 feet.
2 do	12	do

Large Tile for drains about dwellings, yards, &c., of various sizes, $4 and $8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains at $4 per 100 feet. Drain your land and save your crops. Orders from a distance will receive prompt attention. A. S. BABCOCK.

Albany, April 20, 1854—w&m6m

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THE subscribers are prepared to furnish Drain Tile of the various and most approved Patterns, at from $12 to $18 per 1000 pieces. The Tile are more than 14 inches in length and a larger calibre than any of American manufacture for the same prices. We warrant every Tile to be perfectly sound, to fit good at the joints so as to admit water and keep out the dirt, and to drain Land from 12 to 20 feet on each side of the drain, according to the nature of the soil.

Also, large Tile for small brooks and drains about dwellings, &c. at from $4 to $8 per 100 pieces.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at Messrs. L. & W. MERCHANT's, 71 Quay-st.

Full directions for laying Tile will be sent free to those addressing the subscribers. Orders are respectfully solicited.

Address, APPLETON & ALDERSON,
April 13—weow&mtf 195 Washington-st, Albany, N. Y.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

Imported Horse Consternation.

THIS well known, thorough bred horse will stand the present season, as heretofore, at the farm of the subscriber, one mile west of Syracuse. For full pedigree, see Derby and Miller's edition of Youatt. *Terms*, $10 the season; $15 to insure, payable in advance in all cases. Good pasturage furnished at 50 cents per week. Mares at risk of owners in all respects. No mare will be served that is either ringboned, spavined or blind. J. B. BURNET.

Syracuse, May 1, 1854—w2m—m3t

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—mly. B. V. FRENCH. Braintree, Mass.

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits. and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

Contents of this Number.

THE FARM.

What Time shall we Cut Timber? 201
Alimentation, Laws of, by J. I. Andrew, ... 201
Nitrate of Soda as a Fertilizer, ... 204
Gypsum and Ammonia, by W. H. Brewer, ... 205
Stumps and Stump Machines, by P. A. Way, ... 205
Clearing and Seeding New Land, by J. H. M., ... 206
Nitrate of Soda, How to Apply. 207
Potatoes, Plaster for, by L. Griswold, ... 207
Hay, Time to Cut and How to Cure, by L., ... 208
Manures, Covered and Uncovered, ... 209
Weeds should be Destroyed, ... 210
Wheat, to Prevent Smut in, by R. Stewart, ... 210
Brakes and Ferns, to Destroy, by E. S., ... 210
Clover Seed Saved by Machinery, ... 211
Nitrogen, by S. W. Johnson, ... 212
Fences, Wire and Live, by D. and S. A., ... 215
Corn, Sowing for Fodder,—Seasonable Hints, ... 216
Sod and Subsoil Plows, by P., ... 217
Bones, Preparation of for Use, by H. E. Decker, ... 217
Drains, Stone and Brush. 218
Canada Thistles, to Destroy, ... 218
Rotation of Crops, ... 219
Agricultural Societies,—Information Wanted.. 220
Cement Water Pipes,—Reaper and Mower Combined, ... 221
Answers to Inquiries, ... 225
Cisterns, How to Make, ... 229
Notes for the Month, ... 226

THE GRAZIER.

Training Colts, by J. S. H. and J., ... 206
National Cattle Show in Ohio, ... 207
Animals, Breaking Young 214
Stock, Awarding Premiums on, by J. N. Smith, ... 218
Poultry House, ... 222
Cattle, Straw for, by J. H. Woodburn: 222
Breeding Sows, Proper Food for, by Otsego, ... 222
Sheep, Worms in the Head of, by J. W. Colburne, ... 223
Lambs, How to Dock, by C. Babcock, ... 223
Poultry, Gapes in, Cure for, by G. W. Savage, ... 224
Sebright Bantams, ... 224
Sore Shoulders in Horses, ... 228
Ayrshire Cattle,—Training Steers, ... 228
Cotswold Sheep,—Warts on Cattle, ... 223

THE HORTICULTURIST.

Vines, to Protect from Bugs, by S., ... 218
Nursery Trees. 218
Trees, Depth for Setting, ... 219
Carnations and Picotees, How to Layer, ... 219
Trees, Over-Manuring, ... 219

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TO Agricultural Societies and others requiring the best bred Cattle from England, embracing Pure-Blood Horses, Short-Horns, North Devons, Herefords, Ayrshire and Alderney Cows.

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James M. Miller, Agent, New-York City.
THOS. BETTS & BROS. Herts, England.
July 1—mtf

Land for Sale.

THE subscriber offers for sale, a portion of his valuable Tract of Land, situated in the county of Fairfax, Virginia, on and near the Turnpike leading from Georgetown to Leesburgh, 16 miles from the city of Washington, 2 miles from the Potomac river and canal, and within 2 miles of the Loudoun, Alexandria, and Hampshire Rail Road. The tract contains about 2000 acres of Land; of which, from 500 to 600 are in a heavy growth of oak and chestnut, and the remainder of the wood land is in pines of the second growth. It is of a deep red soil, and adapted to Grain, Plaster, Clover, and all kinds of Grass. On the premises are 4 comfortable Dwelling-Houses, and also a Grist-Mill, but not in running order. The land will be sold in lots of 100 or 200 acres, or as the purchaser may desire. For further particulars inquire of the subscriber on the premises.

S. S. MILLER,
Spring-Vale, Fairfax Co., Va.
July 1, 1854—mtf

THE COUNTRY GENTLEMAN.

A Journal for the Farm, the Garden, and Fireside.

THE Country Gentleman has now been published 18 months, making three large and beautiful quarto volumes of 416 pages; and the gratification with which it has been received by the public, and the liberal circulation already extended to it, show that its general plan and object have met with the hearty approbation of those whose interests and improvement it was intended to promote. It combines in one large sheet, an Agricultural, Horticultural and Family Journal, furnishing, besides its large amount of practical matter on Rural Affairs, in its Fireside Department, a choice collection of articles peculiarly adapted to interest and exalt the views and aims of the Family Circle, together with a careful digest of the News of the Week, and a full report of the Produce and Cattle Markets; and it will be the constant aim of the publisher to make it indispensable to the Farmer, and desirable to every one who has a rod of ground to cultivate, or a home to beautify—and by devoting its columns to Improvement in Agriculture, Elevation in Character, and Refinement in Taste, to render The Country Gentleman the standard in its sphere.

It is illustrated with superior engravings of Houses, Farm Buildings, Domestic Animals, Implements, Fruits, Flowers, &c., and printed in a neat and attractive style, forming two handsome quarto vols, of 416 pages each, per year.

Terms.—Two Dollars per year, and Three copies for $5. Six copies will be sent six months for $5; the money in all cases to be remitted in advance.

A new vol. (the 4th,) commences the 1st of July, 1854.

The Cultivator, which has now been published for twenty years, is still continued by the subscriber, and is too well known in every part of the Union to need commendation. It is believed that it is not too much to say that it has always enjoyed the reputation of ranking as the first of our monthly rural journals. It is now published at Fifty Cents a year, and to Clubs of eight or more, at 37½ cents.

☞ All letters to be addressed to LUTHER TUCKER, Ed. Co. Gent. and Cultivator, Albany, N. Y.

Credentials of the Country Gentleman..

A gentleman in Massachusetts, distinguished for his scientific attainments and his practical skill as an agriculturist, writes us: "I cannot close without expressing the gratification I feel in reading the *Country Gentleman* from week to week. If the hearty approbation of a single reader is of any worth to you, you have mine most heartily, I assure you."——Another, in sending in his subscription, says: "I cannot refrain from expressing to you the great satisfaction I have had in reading the *Country Gentleman*. I consider it the most valuable family paper for the farmer that I know of."——From a gentleman in Western New-York: "I consider the *Country Gentleman* the best paper for our farmers I have yet seen."——A subscriber at Pittsburgh, Pa., says: "I read the *Country Gentleman* with much pleasure and profit; and I think there is but one sentiment among its numerous readers, and that is, that it is the leading agricultural periodical of our country, useful and practical."——A subscriber in Tennessee writes as follows; "I confess my admiration of your weekly journal, the *Country Gentleman*—this beau ideal of the denizen of the soil."——From a subscriber in Dutchess county: "I have taken the *Country Gentleman* since it was first published, and I think it the best agricultural paper I ever took, if not the best published in the land."——From a subscriber in Ohio: "Let me say to you, that I think the *Country Gentleman* decidedly the best agricultural paper in the country, and I have seen and read many, for their name is legion."——From another subscriber in Ohio: "I value the *Country Gentleman* as the best of *sixteen* agricultural papers which I take"——The Hudson Gazette pronounces it "*decidedly the best agricultural publication in the country.*"——The Winsted Herald says: "On all matters pertaining to the occupation of the Farmer and the Horticulturist, as well as to Domestic Architecture and the country Fireside, *it is without a rival.*"

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A MONTHLY JOURNAL OF

Agriculture, Horticulture, and Domestic Economy.

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THIRD 𝔗𝔬 𝔍𝔪𝔭𝔯𝔬𝔳𝔢 𝔱𝔥𝔢 𝔖𝔬𝔦𝔩 𝔞𝔫𝔡 𝔱𝔥𝔢 𝔐𝔦𝔫𝔡. SERIES.

VOL. II. ALBANY, AUGUST, 1854. No. VIII.

On the Practical Value of the Analyses of Soils.

BY S. W. JOHNSON.

The continued recommendation of soil-analyses, as a guide to the farmer, makes it proper to discuss at length their practical value. As a means of developing the natural laws of growth and cultivation, chemical analysis must continue to be, as it has been, of the very highest importance. A few years ago, in the infancy of agricultural science, it was found in many cases, that analysis indicated correctly what improvements were needed by soils; and the adoption of the general principle —*that plants require for their rapid development, that the composition of their ash should be reflected in the soil; i. e., that those inorganic ingredients which are found in a plant in large proportion must be present in the soluble part of the soil in large proportion, in order to produce that plant*—led necessarily to the idea, that, by comparing ash and soil analyses. an easy adjustment of the soil to the wants of the plant might be made.

The accumulation of knowledge on these topics has, however, clearly shown, that although it is often true that the analysis of a soil economically indicates the amendments that are needful to make it productive, it is frequently the case, that an analysis fails altogether to furnish useful indications; and if its results are valuable, it is often the case that they cost more than they are worth, or at least, knowledge equally good, perhaps better, might have been far more cheaply and certainly obtained.

The opinions of learned men on the value of soil-analyses for *practical purposes*, are very various BOUSSINGAULT long ago declared them "more curious than useful." STOCKHARDT, in his 2d series of Chemical Field Lectures, Leipzig, 1853, has written as follows: "To estimate the productive quality of a soil by chemical analysis is at this time impossible, and will indeed remain impossible." Prof. WOLFF, of Hohenheim, Wurtemburg, in his recent classical treatise on scientific agriculture, writes of the scientific importance of making a certain class of soil-investigations—which have not yet been undertaken; but of the practical use of analysing this or that soil in particular, to assist in improving it, he says not a word that I have been able to find, in the whole work of 1200 pages. He is, however, of the opinion that, "in general, Practice has gone ahead of Science, in its ability to judge of the fertility of a soil;" and he therefore wisely recommends that "science connect her labors with the experience of the farm, endeavor to solve the problem that practice furnishes, and thus do the agriculturist direct service, in explaining the phenomena with which he is already acquainted." Prof. J. F. W. JOHNSTON, in the older editions of his lectures on Ag. Chemistry, attached a medium value to soil-analyses. The confidence of Prof. NORTON in their use was quite firm in the early part of his career, but in his later public addresses, and more decidedly in private conversation, he expressed his faith in qualified terms. Prof NASH of Amherst, has advanced the opinion, that were analyses of soils made at state cost, they would be very useful; but otherwise considers them too expensive for common use. Mr. MAPES of the Working Farmer, has industriously advocated soil analyses, as a practical guide to the farmer, and has published many in his paper.

In this disagreement of the doctors, let facts decide.

It would be proper to remark here somewhat on the methods in which analyses are carried out, for in scarce any matter is humbug more rife than in this, but the matter will be but briefly noticed for the present. When speaking of analyses in the course of this paper, only such are meant, as are carried out conscientiously, skilfully, and with a full knowledge of the subject; which are, in fact, just all they pretend to be; and which, further, define precisely, what they pretend to be. No account is taken of $5 analyses. A reliable analysis cannot by any means be made for so little money, *and support the analyst.* The two great societies of Great Britain, indeed, make analyses for their members at 1 guinea, if I remember right; but distinctly state that this is a nominal price, scarcely more than paying for the substances used, without reckoning the operator's time. It is possible that certain analysts may have discovered improved processes, by which their labor and expense is abridged; but such processes have not been submitted to the judgment of the scientific world, and cannot pass current there.

Admitting that a good analysis can be procured, have we evidence that it can be so carried out as to represent the composition of the soil? A farmer has several hundred acres of soil; how many analyses are needed "to cover all this ground?" Often on a small farm, if we can judge by the look of the earth, there are a half dozen varieties. There are frequently decided variations within a very small area; and it rarely happens on farms that have been long under cultivation, that one specimen of soil represents the whole. The soil that is annually worked over by the plow, is different from the undisturbed subsoil; and the latter may vary every few inches of its depth. How many analyses then must often be needed! But it is said,—"collect from various parts of the field, and thus get an average." This is but making bad, worse; for the analysis of such a mixture, only represents the composition of the few pounds which have been sent to the chemist; but not that of the millions of lbs. that remain in the fields. In very many cases—not indeed in all—the number of analyses that must be made, renders the whole thing impracticable.

But admitting the soil of the whole farm to be uniform in composition, what are the accidents that may vitiate analytical results? It may easily happen that an egg or snail shell lodge in the identical specimen of soil selected for analysis—then the carbonate of lime may come out too high. The droppings of a dog or bird, will thus make a thousand acres rich in phosphates!

Allowing, however, that such contingencies may be perfectly provided against, and that a competent chemist has made a bona fide analysis of a fair specimen of the soil—is chemical analysis, even of the most refined character, capable of giving constant results on the same soil, or valuable results at all? In 1846 the Prussian "Landes Œconomic Collegium" instituted a series of experiments "to determine in what proportion certain inorganic ingredients of the soil must be present in order to nourish definite plants." To settle this question experimentally, it was concluded to select 14 soils in various parts of Prussia, to have three specimens of each analysed under the direction of such chemists as Liebig, Rosè and others; then to crop these soils from year to year with rape (Brassica napus) and peas, until they were so exhausted as to be able to produce no more; when it was proposed to analyse them again, and ascertain the loss they had incurred. The 42 analyses were communicated to the public, by Pro. Magnus in May, 1849, and are accessible to the English reader, in Liebig and Kopp's Report on the Progress of Chemistry for that year. From these analyses, executed by the most competent chemists that the world furnishes, results—what might have been expected, that three analyses of the same soil, carefully collected for the purpose, give variable results. In one soil, for example, one chemist found .009 pr. ct. of phosphoric acid; another .169 pr. ct., and the third .832 pr. ct. In another soil, in one specimen is found a quantity too small to be weighed, a "*trace*;" the 2d yields 1.028 pr. ct.; the 3d only .009 pr. ct. In another soil, two analyses agree in stating the presence of a pretty good supply, one giving .456—the other .651 pr. ct., while according to the third analysis there is *none!* In another soil, on the other hand, two analyses agree that phosphoric acid is absent, while according to the third, it contains .229 pr. ct. Similar variations occur in the other ingredients. Which of these analyses shall serve as the basis of a prescription for improving the soil? The farmer is advised never to have more than one analysis made of his sick soil; if he gets three, they will give him more trouble than employing as many physicians of different schools when he himself is sick. Each one makes a different diagnosis, and demands a different prescription.

Magnus calculates that the average harvest of rape seed and straw, from a "morgen," contains 13 lbs. of phosphoric acid. The soil of a morgen taken to the depth of 9 inches, he calculates would weigh 1,944,000 lbs. 13 lbs. is then 0.00066 pr. ct. of the weight of the soil. Chemical analysis is incapable of deciding as to 0.01 in the case of soils, scarcely as to 0.1 pr. ct. How many crops, and how many lbs. of phosphoric acid may be removed from the soil, and chemical analysis never be able to tell the difference?

Magnus further shows that from a soil in which the closely agreeing results of three analysts gave 0.0073 pr. ct. of phosphoric acid, three crops of rape were gathered, in '46, '47 and '48, the last of which was greater than the first (no manure was used,) and the three crops, not including chaff, drew from the soil a greater percentage of phosphoric acid, viz., .018 pr. ct. of the soil, than the soil contained according to the three analyses—viz., .0073 pr. ct. Magnus remarks—"It follows from this, that plants do not need to find in the soil any much greater quantities of a substance than is required to their development."

Every farmer who has employed guano successfully, knows that 400 lbs. per acre is a good application, often making a crop double and quadruple in its yield. An acre contains 43,560 sq. ft. Taken to a depth of 6 in. it has half this number = 21,784 cubic feet. Assuming a cubic foot of soil to average 80 lbs. in weight, (Johnston's Lectures, p. 291 Am. ed.) we have then for an acre to the depth of half a foot, 1,742,400 lbs. of soil. 400 lbs. = 1-43561, = 0.00023 of the weight, = 0.023 pr. ct. of the weight of an acre of soil. Peruvian guano contains say 25 pr. ct. of phosphates = ¼ of the whole. ¼ of 0.023 pr. ct., is 0.0058 pr. ct. Ammonia averages 17 pr. ct. of the best guano, call it 20 pr. ct. = 1-5. 1-5 of 0.023 = 0.0046 pr. ct. These fractions then, 0.0058, and 0.0046, respectively represent the additions in per cents of phosphates, and of ammonia which an acre of soil receives in 400 lbs. of guano, supposing the latter to be uniformly mixed to the depth of 6 inches. A ton of guano would add five times as much, viz., 0.029 pr. ct., and 0.023 pr. ct.

Chemical analysis is utterly incompetent to discover these slight quantities. The addition of a ton of guano to an acre of soil, would make no perceptible difference in the results of an analysis! But the farmer knows that a soil now giving a moderate crop, will often yield a very heavy one, by adding to it a few hundred weight of guano, and be totally spoiled for several years, on addition of a ton. Yet chemical analysis would give him results practically identical in all these cases.

Practice has taught that exhausted land often recovers its fertility wonderfully, by laying a season or two in fallow. Yet in this case nothing is added to the soil. On the contrary, its organic matter must waste by the ordinary process of decay. The renewal of fertility, depends merely upon a change in the *condition* of the soil. Ingredients before insoluble, become soluble and available; but analysis, at present, is by no means able to follow, and estimate these changes. In fact, if it be admitted that the chemist can estimate *quantities* with the utmost accuracy and nicety desirable, yet he cannot set *qualities*, *conditions*, in their true light. His attempts at this must ever remain vague and unsatisfactory; for the soil is the subject of perpetual changes, which he can only imperfectly understand, much less imitate.

So much depends upon the *physical* condition of the soil, that analysis alone, can form no safe basis of judgment. Nothing but lichens and mosses will grow on a block of granite. Reduce the granite to pieces as large as pins-heads, and it forms a poor soil. But grind it to a fine, impalpable dust, and wheat sown in it will grow and mature, if it have suitable weather. Yet granite is granite, "though it be brayed in a mortar." It contains the needful inorganic elements, but they are slowly soluble in water. Increase the surface on which water may exercise its solvent action, a million or a million million times, as is done by pulverization; and we proportionately increase the quantity of matter, which the granite may yield to water and to plants in a given time. By simple pulverization, we may convert a mountain of rock into a field, in which the tender grains will almost reach perfection.

The readers of *The Cultivator*, will remember that a few years ago, Wells of Cambridge, analysed several soils of the Scioto valley, distinguished for their fertility; having yielded excellent crops for many years without manure. The results of the analysis did not essentially differ from those obtained on the poor soils of New England. The extreme fineness of the particles, gave the only clue to the difference in their fertility. English agriculture is full of examples of sandy barrens being converted into productive fields by underdraining, subsoiling, and plowing under green crops, with only trifling additions of manure. In these cases it is a change of physical condition, not of chemical composition, that has caused most of the benefit. Whatever stores of nutriment may exist in a soil, they cannot avail any thing, unless they are accessible to the plant. If the soil is a heavy water-soaked clay, plants cannot extend their roots into it. If it is a wet sand, they refuse to extend their roots in it. But analysis yields the same results, whether the soil is coarse or fine, whether wet or dry. The chemist dries them all to the same degree, and they must alike be ground beneath his unrelenting pestle. Could the chemist analyse the whole field, he could tell its composition to a grain; could he operate with the 100th part of it, his results would be very exact; and with the 1000th part they would be sufficiently accurate: but when from the analysis of a few ounces conclusions are to be drawn as to the treatment of the 2,000,000 lbs. in an acre, or the many millions of a large farm, and this, to tenths, or hundredths of a pr. ct., the matter becomes ridiculous. Chemical analysis is wonderfully accurate when adjusted to the proper scale, but a microscope won't serve to study the stars. The results of the analysis of 10 grains of pure common salt represent the composition of all the salt in earth and sea, because salt is perfectly homogeneous; it always consists of the same elements in the same proportions; but the soil may be the most heterogeneous mixture in all nature, as a glance at its origin shows.

But it may be answered, that it has often happened that the analysis of a soil has enabled the chemist to inform the farmer what applications must be made, in order to renew a lost fertility, or establish it in a soil hitherto barren. This cannot be denied. Cases do occur in which analysis gives strikingly valuable results. But it is yet to be proved, that such cases are common. It may be observed that the prescriptions founded on analysis, usually cover a pretty large ground; they almost invariably recommend those applications which crops most need, and for every one ingredient that is wanting, several are supplied. Thus if potash be deficient, ashes are recommended: if phosphoric acid be wanting, bones, or superphosphate of lime are the remedies; if ammonia be thought needful, guano is advised; while barn-yard manure, is at once a panacea for all these evils. A careful sifting of all these cases, would doubtless strip the results of much of their wonder, and refer many of them to very simple and obvious causes.

I do not doubt that in very many cases a careful *investigation* of a soil—chemical, physical and historical—by a genuine scientific farmer—one, familiar at once with science and practice—would afford safe and nearly accurate data for its proper treatment. But this would be always expensive, and in nine cases out of ten, would not *pay*. *Soil analysis, at the best, is a chance game; and where one wins, a hundred may lose.* It is the royal road to what the farmer should reach by study, and a profound understanding of natural laws. By this is meant that it is no practicable road, not one which should be often trodden by the man of moderate means; athough it may be entered upon by the wealthy and curious, who have no need to work in order to eat. A soil-analysis is always interesting, often valuable, rarely economical. It may amuse the amateur, and instruct the philosopher, but for the farmer its value is small, if he has to pay for it. It is only by the application of the general principles which may be developed from numerous analyses, that he can hope to be directly benefited.

But what shall the farmer do? Shall he grope in the dark? No! But let him beware of false lights which are now-a-days hanging out in abundance. Let him beware of taking advice from two dangerous characters;—the conceited farmer who knows a little science, and the officious philosopher who knows a little farming.

It is far more difficult to warn against a course that is unsafe, than to point out one that will lead to desirable ends. Practice must accomplish many of her ends in her own ways for a long time to come. She should thank Science for rebuking her errors, and should reject them as they become manifest. She should accept the light that Science sheds upon her path, though the rays be those of a taper. Science should carry herself modestly, as befits her youth, and not talk too loudly on all occasions of old-fogyism *vs.* progress. She should remember her failings. The sister of 60 centuries, and she of tender years, should join hands, and walk harmoniously together towards the fields of promise that lie in the fruitful Coming Time. *Munich, May*, 1854.

Construction of Cisterns.

In consequence of the repeated inquiries we receive for information relative to the best construction of rain-water cisterns, we are induced to furnish some brief practical hints on the subject. The great value of an abundant supply of water to houses and barns, and which may be easily had by providing capacious cisterns, renders it important that the cheapest, best, and most convenient mode of construction should be adopted.

The two all-essential requisites for under-gronnd cisterns, are good hydraulic lime, and a supply of clear pure sand. These must be selected from experience or trial, or by choosing such as have already proved efficient for this purpose. Good hydraulic cement will in the course of a few months become about as hard as sandstone. When this hardening process does not take place, it must be attributed to bad materials, or to intermixing in wrong proportions. On the latter point, some are misled by adopting the practice employed in mixing *common* lime mortar, the hardest material resulting in this case where the sand constitutes about five-sixths of the whole. But the hardest *water-lime* mortar cannot be made if the sand forms much more than two-thirds of the whole.

A very common and a cheap form for the cistern is to dig a round hole into the ground with sloping sides, somewhat in the form of a narrow-bottomed tub, and then to plaster immediately upon the earth, fig. 1. Unless a slope is given to the sides, the mortar cannot be made to keep its place while soft, as it is nearly impossible to find a soil dry and hard enough to retain the plastering by simple adhesion. The top of this kind of cistern must therefore be wide, and consequently difficult to cover very large ones effectually and substantially. The covering is usually made by stiff and durable plank, supported if necessary by strong scantling, and over this is placed about one foot of earth to exclude completely the frost. A hole with a curb, about eighteen inches by two feet, must be left in this covering, for the admission of the water pipe or pump, and to allow a man to enter for cleaning out the cistern when necessary. In cold or freezing weather, it is indispensably requisite to have this hole well stopped to exclude frost, which would otherwise enter the wet cement or walls, and produce cracking and leakage—a frequent cause of the failure of water-lime cisterns.

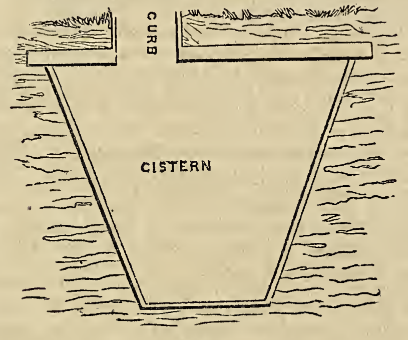

Fig. 1.

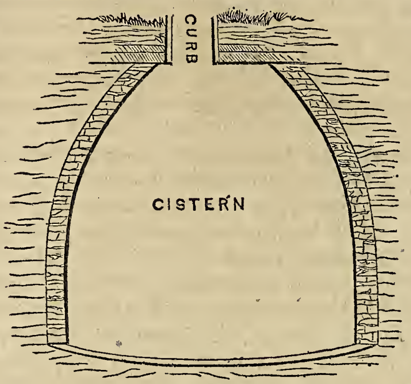

Fig. 2.

This is the cheapest form of such reservoirs, but a better, more capacious, and more durable mode is to dig the hole with perpendicular sides in the form of a barrel, and build the walls with stone or hard brick, to receive the plastering. (Fig. 2.) In consequence of its circular form, operating like an arch, these walls will not be in danger of falling if not more than half the ordinary thickness of similar walls. For large cisterns they should be thicker than for small ones. The walls should be built perpendicular until about half way up, when each successive layer should be contracted, so as to bring them nearer together, in the form of an arch, reducing the size of the opening at the top, and rendering a smaller covering necessary. If the subsoil is always dry, or never soaked or flooded with water, the walls may be laid in common lime mortar, and afterwards plastered on the inner surface with the cement. But in wet subsoils, the whole wall should be laid in water lime. If the bottom is hard earth or compact gravel, a coating of an inch or two may be spread immediately upon the earth bottom ; but in other instances the bottom should be first laid with flat stone, or paved with round ones, the cement spread upon these.

The plastering upon the sloping earth walls as first described, (Fig. 1,) should never be less than an inch thick, and if the earth is soft, it should be more. On the stone or hard brick walls, (Fig. 2,) half an inch will be thick enough. Cisterns can rarely if ever be made free from danger of breaking, without giving them at least two successive coats, and three will be safer—the previous coat in each instance being allowed to become dry and hard.

As the best mortar begins to harden in a very short time after mixing, it is best to mix the lime and sand *dry*, and to apply water to small successive portions as wanted.

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The Cherry Slug.—This larva, which eats the pulpy part of the leaf of the cherry, and sometimes of other fruit trees, is most effectually routed by a sprinkling of lime. Air-slacked lime, applied in the dew of the morning, usually accomplishes the desired purpose. Dry, water-slacked lime, taken fresh, is still better, being more caustic.

Notices of New Books.

Farm Implements; and the Principles of their Construction and Use; an Elementary and Familiar Treatise on Mechanics, and on Natural Philosophy generally, as Applied to the Ordinary Practices of Agriculture. With 200 engraved Illustrations. By John J. Thomas. New-York: Harper & Brothers.

This is just such a book as we should expect from the previous well known and highly valued works of Mr. Thomas. Simple and unadorned, though by no means dull or uninteresting in style, it gives the plainest evidence that it was written—not for the sake of making a book, but because there was information needed on the subjects of which it treats, and with the sole end in view of conveying that information in the clearest and fittest manner. Where the principles of mechanics require minute explanation, as directly or indirectly connected with the farmer's every-day toil, his illustrations are carefully drawn from the farmer's every-day life. He blends together agricultural information and mechanical. And in the somewhat beaten track of works on Natural Philosophy, we think the treatise before us quite as successful as any with which we are acquainted—not even excepting those which our college professors have endeavored to adapt to the wants of schools and academies.

It would be needless to point out in this age of machinery and calculation, the intimate connection between every object about us necessary to our comfort or enjoyment, and the laws and forces of mechanics. While their investigation is to the mere inquirer an interesting study, those who live by the sweat of the brow in almost any capacity whatever, and many whose labor is of the brain, are obliged to understand them. They are at the foundation of man's progress every where and in every way. So long as his experience with matter was his only guide, he was still and stationary. But when he learned to reason from this experience,—when Bacon taught philosophy to be his servant and not his master, his advances soon became quick and real. In every art to which the mechanical knowledge, thus acquired, has been applied, its victories, often unexpected and always wonderful, have been but stepping stones to still higher attainment.

In agriculture, however, until a comparatively recent period, the true principles of mechanics have been unapplied, and as a consequence, little advance attained. And now, although improved implements are the product of almost daily invention, their use is far from being as general as we should wish, or as most imagine. The farmer is not well enough versed in the first principles of mechanics, to see the importance and economy of their being strictly followed in the tools he uses. His fathers gathered in harvest after harvest while they lived, and why should he not take the same course they took, to accomplish the same result? It is recommended by the respect with which he views its authors and by the love he bears the old fields where it was ever practiced; he is strengthened in it by his isolation from his fellows, perhaps by the moderate success which it obtains. He needs, we repeat, most of all, a thorough understanding of the laws and forces of mechanics,—not, it may be, a sufficient knowledge of details to construct, but of principles to appreciate and judge of what he uses,—nor indeed, the investigation of any new principles, but intimate acquaintance and careful application of the old.

Agricultural writers, so far as we know, are very deficient in supplying elementary information on this subject. Loudon rather catalogues agricultural implements than explains mechanical principles. Low's work on Practical Agriculture, requires previous study and is then far from being a full compendium. American writers have, thus far, elicited very little, really new, on any point, and on none are they more lacking than this. In 1849, this want attracted the attention of the committee of the New-York State Ag. Society on Essays and Experiments, of which the lamented Delafield was chairman. Accustomed to view every thing in its practical value and bearings, he appends to his official report the following just remarks:

> "While we admit the fertility of the inventive genius of our citizens, we have reason to regret the many obstacles remaining in the path of the farmer, preventing in a degree, the most effective power of mechanism, to aid in his toil and labor. The science of force and motion (mechanics) is necessary and important to the perfection of the farmer's work. Some knowledge of practical mechanics is essential to a right understanding of the tools needful for his use, their proper construction and strength. The force of fluids as well as solids is important to him in draining, irrigation, in protecting his soil from injury by streams. The common occupation of loading his wagon, and other farm operations, often give evidence of the want of knowledge, in relation to the laws of gravity.
>
> "With these impressions the committee suggest the propriety of offering a premium for the best essay on mechanics or the science of force and motion (solids and fluids,) to be divested, as far as practicable, of technicalities, and illustrating the importance of this branch of science in prosecuting successfully the ordinary pursuits of agriculture."

The premium thus suggested and subsequently offered by the society, was the next year awarded to Mr. Thomas, whose Essay was published in the Transactions for 1850. It forms the basis of the present volume, which has however been re-written, much enlarged, and more amply illustrated. No work devoted to the whole science of agriculture could enter into details so minute as those here furnished, on any single branch; and we think no one branch of agricultural science now more in need of popular elucidation than the mechanical.

Mr. Thomas' book admirably fills this want; and if what we have said of its character and that of its contents, shall lead any one to study it, our time and his, will have been well spent. Even those who have had previous opportunities of acquainting themselves with the principles of natural philosophy, will in its application of them to agriculture, find much that is new and valuable; and we hope that those who have not, will, if they wish properly to qualify themselves for the duties of the farm, immediately enter upon the field which is now spread before them.

Hoven in Cattle.

Mr. Dun, the well-known and able lecturer on Veterinary Medicine at the Edinburg Veterinary College, and author of the excellent Treatise on Veterinary Medicines, their actions and uses, has lately published an article on the above subject which we will attempt to abridge and condense for the benefit of our readers.

The stomachs of cattle being large, complicated, and adapted for the thorough digestion of food, are greatly more liable to derangement and disease than the small and simple stomach of the horse. The rumen, paunch, or first stomach of cattle is liable to undue distention from gas, food, or foreign bodies. Distention of the rumen from gas, constituting hoven or blown, is produced by the eating of wet clover, of turnip tops, or even of a few mouthfuls of any rich succulent food to which the animal has been unaccustomed. Such improper or strange food irritates, and then paralyzes the stomach. It resists the solvent action of the digestive fluids and arrests the digestion of the natural food with which it mingles. Fermentation, with the consequent evolution of gas, is thus established. Choking is another cause of hoven. The irritation produced by the obstruction of the gullet deranges the nervous influence which presides over digestion; and the functions of the stomach being thus arrested, its contents undergo chemical change. Many diseases which disturb digestion also give rise to hoven. This is often observed in diseases of the liver and in inflammation of the bowels. Such cases of hoven are extremely troublesome. They come on slowly, and usually continue until the disease on which they depend is relieved.

The symptoms of hoven often supervene with great rapidity. An elastic swelling rises on the left side; and, in bad cases, may even be perceived on the right side. The back is arched, the hind limbs brought under the body, and the tongue hung out. Saliva drivels from the mouth. The breathing is quick and labored from the distended stomach pressing forward upon the lungs. The rectum is often protruded; and in pregnant cows abortion not uncommonly takes place. Unless the animal be speedily relieved, death will sometimes occur in eight or ten hours, and usually results from the immense swelling arresting respiration, or rupturing the stomach and abdominal muscles.

Treatment.—Many cases recover spontaneously; but it is never advisable to trust to such a result. The means of cure should always be used. These are numerous and various, according to the cause, degree of severity, &c., &c. In a slight case the animal may be driven about, when the symptoms will generally disappear. If, however, there be much distention, dulness and disinclination to move, the driving about may do more harm than good. The introduction of the probang, with the small end downwards, is often useful, the gas making its escape with a prolonged hiss. If it does good at all, it will be at once; and if not, the probang should be immediately withdrawn. All the internal medicines of acknowledged value for the cure of hoven are stimulants. They rouse the paralyzed organ, and thus expel its gaseous contents. Stimulants are generally given in too small doses. An egg shell full of turpentine, a glass of whisky, or a drachm or two of ginger, are absurdly small doses in case of hoven. Ten times these doses may be given, not only with impunity, but with advantage. There is no fear here of causing inflammation, and no hope of success but in the *full* action of an active stimulant. If turpentine is most convenient, give six ounces with a pint of linseed oil. Half a bottle (pint or quart not stated) of whisky, brandy or gin, with two or three ounces of ginger, is also a good medicine. So also are 2 or 3 oz of sweet spirits of nitre, or 1 oz. of carbonate of ammonia, in some gruel. Such doses should be repeated evey hour until the swelling yields. Friction of the abdomen assists the action of the medicine. When the above prove fruitless, and the symptoms are severe, it will be advisable to fracture the stomach. This is attended with scarcely any danger. It is best performed with a trocar and canula, which is thrust in at a point as nearly as possible equidistant from the prominence of the haunch, the lumbar vertebræ and the false ribs. The trocar being withdrawn the gas rushes through the canula. The operation may be performed, however, with a large pocket or table knife, either of which is preferable to a pen-knife. The wound heals readily, requiring nothing but a pitch-plaster. A dose of physic should then be given, as 1 lb. of common salt and 2 ozs. of ginger, or a pint of linseed oil. Cattle subject to hoven should be fed carefully, and may be benefited by taking 3 or 4 drachms of green vitriol occasionally. They should also have salt always within their reach.

Andalusian Fowls.

Friend Tucker—I enclose you a description of my Andalusian fowls, for the Poultry department of your valuable paper. They are not fully described in any work on Poultry that I have ever seen. The original stock was imported in the bark Asa Fish, by Capt. Isaac Gates of Mystic, Ct., from Leghorn, Italy, in the fall of 1851, and they have been bred in that vicinity since. The cocks are red, with a large single upright comb, deeply serrated, and of the most brilliant scarlet, with wattles of proportionate size. The hens resemble the black Spanish fowls in size and appearance, with a large, deeply serrated, but drooping comb. Plumage of a grey to a mealy white; end of the tail, tipt with black; legs of a bluish white to a slate color.

The importer calls them Leghorns, from the port of exportation, under which name I exhibited them at our county fair last fall, although I was convinced that that they were identical with the fowls mentioned in Dixon and Keir's Ornamential and Domestic Poultry, pages 210 and 211, as Andalusian fowls, imported from Andalusia, Spain, by Mr. Leonard Barber in 1846 At the suggestion of Gen. R. U. Sherman, Chairman of the Committee on Fowls, I have adopted the name of Andalusian Fowls, believing as I do that they came originally from Spain. As layers they are equal, if not superior. to the black Spanish fowls. They are a most valuable as well as beautiful addition to our poultry yards. E. H. Bliven. *Hope Farms Bridgewater, N. Y. June* 12, 1854.

The "Economical Manure."

For some time past there has been used to some extent in England and Scotland, an artificial manure, to which the above title has been given. If testimonials are to be relied upon at all, this manure *must* be possessed of very desirable properties. In the month of May last it was analyzed by a competent chemist in Edinburgh, and found to be composed *mainly* of, 1st. protosulphate of iron, or green vitriol, about 35 per cent; 2d, of sulphate of lime, or gypsun, about 16 or 17 per cent; and 3d, of chloride of sodium and other alkaline salts, about 26 to 34 per cent. In one specimen analyzed the chloride of sodium amounted to 16.31 and the other alkaline salts to 10.66, or in all 26.97 per cent, and in another specimen to 17.43 and 16.88 respectively, or in all to 34.31 per cent.

Now, as a manure of such a composition might be easily and cheaply got up by any agriculturist, we subjoin a specimen or two of the testimonials which have been given of its fertilizing properties. One testifies that on that portion of a field of barley on which this manure was sown broadcast, mixed with ashes, the growth of the barley was wonderfully thick and luxuriant to what it was on the other portion of the field. Another testifies to its having most beneficial effects on his garden crops, and to his cattle being very partial to a part of a field of grass to which it had been applied. "Your manure," says Mr. John Davenport of Staffordshire, "improved the wheat very much, and the grass it sweetened, and the cows eat it off very bare all the summer." "Your manure," says one, "was sown with clover, and it is most luxuriant."

It is called the "economical manure," because ¼ to ½ cwt., per acre fully equals in effect 3 cwt., of the best Peruvian guano, and because the saving in cost is thus at least 50 per cent. It is applied with two or more times its bulk of light earth or peat-mud, or ashes or sawdust or anything of that kind, broadcast. It has been also employed in solution. In this state we presume it was applied to some apple and pear trees, of which it is said to have improved both the oliage and the fruit. We may close by stating that it is sold in G. Britain at about or a little over the price of the best Peruvian guano, that is about £12 per ton.

Good Condition in Plants and Animals.

There is no better preservative against the attack of many diseases, both in animals and plants, than such a mode of feeding and care as produces what is generally understood by the phrase 'good condition.' Somewhere lately we met with a statement to the effect that the writer was inclined to depend more upon having his sheep in good condition, as a mode of escaping the destructive effects of grub in the head, than upon any specific remedy or preventive application. The paper or book in which this statement was found we cannot now name, not being able to put our hands upon it after some research,* but we are much inclined to be of the same opinion, as it seems to be a general or universal law that animals reduced by starvation, ill-feeding, filth or any source of debility, are much more commonly attacked by disease or vermin, than when in an opposite or good condition. This seems to be the law also in regard to vegetables. Plants growing on exhausted soils are especially subject to blights and diseases. Clover sickness may be mentioned as one instance in illustration of the operation of this law in the vegetable world. On some soils on which clover has been raised a grea tnumber of times, it can no longer be grown with success. In the spring the leaves wither and die, and the roots, upon examination are found to be passing into a state of decomposition, covered with fungi or the larva of insects. Various considerations and observations go to establish it as certain that the decay of this plant is owing entirely to the want of one element in the soil which is essential to the growth of the clover plant. Clover sickness in land may be owing to some original deficiency or uncongeniality of soil; but chiefly to the circumstance of the soil having been exhausted of the nutriment proper for the plant by previous cropping. The same holds true as to potato-rot and turnep disease, to a great extent at least. For almost always newly broken up pastures or wood land will produce good crops of any of the above named plants, and generally for quite a number of years, when a proper rotation is put in practice. *

How to get Water for Cattle.

Mr. Tucker—Many of the otherwise fine farms in Illinois are badly supplied with water for stock. Wells fail, and farmers are compelled to drive their stock oftentimes one or two miles to water.

Such trouble can be obviated in most cases, by selecting some low plat, underlaid with clay, and with a span of horses, plow and scraper, (such as are used on roads,) one man could in three or four days, scrape out a hole, four or five feet deep, and large enough for a hundred cattle to drink from at once. Then a lot of hogs should be fed in the excavation for a few days, until the clay was compressed and rendered waterproof. When this is done, a few furrows leading to higher land, would form a ditch for carrying the water into the hole, and filling it the first rain. In this way a fair supply of water may be obtained. I would advise the setting out of shade trees around the pond, as they would have a tendency to preserve the water pure and fresh, as well as affording a refreshing shade for stock. H. M. M. *Armington, Ill.*

Productive Sheep.—Mr. Burwell of Clarke county, Va., has eleven ewes, which brought him the last winter, twenty-eight living lambs—one of them had four, four had three each, and the others twins.

California Products.—The Californians boast largely of their big turneps and potatoes. Two turneps are mentioned, weighing 29 and 36 lbs. each, and a sweet potato weighing 9 lbs.

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* Found at length in Co. Gent. for June 1, on page 345.

New Method of Fertilizing Land.

I believe it is generally argued by farmers, that shade tends to impoverish the soil ; but after a careful examination, I have come to the conclusion that shade makes land rich. Perhaps those opposed to this theory will say, if shade makes land rich, why does not the soil under every large tree become extremely fertile? It seems to me that every intelligent husbandman might answer this question without much hesitation. The reason is this: the growth of the tree is constantly drawing the strength from the soil, and if the shade did not tend to enrich the land, the soil would soon be so much impoverished that the tree would die. If any person wishes to be convinced of the truth of this new theory, let him try an experiment on a small scale. Take a piece of poor ground, one rod square, and cover it over with brush two feet deep; let it remain covered in this manner four years ; then remove the brush, and if I am not very much mistaken, he will find that the soil has become rich, although no manure has been added. Let any man enter the forest, and examine the soil which has had the growing timber consuming its fertilizing matter for centuries, and he will find that the soil is still very rich. Now I will ask how the fertility has been kept up, if the shade does not tend to fertilize the soil? I shall doubtless hear many say it has been kept up by the manure made of the leaves of the trees. I admit that the foliage tends to fertilize, but the quantity of matter returned to the soil in this way is so small in comparison to what is taken up by the growth of the timber, it is evident there must be a greater source of fertilization, or the soil would long since have been exhausted.

By shading land properly, the soil is made to undergo the putrefactive process, and is converted into a strong and durable manure. Ask farmers that raise flax and spread it upon their land, if the grass is any larger where the flax was spread than elsewhere: they will answer, yes. You may ask them why it is larger; they will say the flax has enriched the land. Ask them how it has enriched the land, and I presume to say, not more than one in ten can tell you.

The cheapest and best way that I think of to shade land, is with clover. Seed your land thick with clover, and let it grow as large as possible without mowing or feeding it off; (for the more dense the shade the sooner the soil becomes rich ;) let it remain shaded in this way two or three years, then plow it up, and if I am not mistaken you will find your land is rich, notwithstanding you have put no manure upon it except the clover seed.

Let this much suffice; for to him whose mind is untouched by this, a volume on the subject would be useless. **Elihu Cross.** *Potter Hill, Rens. Co., N. Y.*

The simple process of shading land cannot impart any fertility whatever, else the north side of a building would soon become enriched by the process. Neither can the *shade* of trees prove beneficial to the soil, and although their growth is constantly withdrawing the strength from the soil, yet the annual extension of the roots, and their penetration into the subsoil, brings them successively into contact with fresh portions of earth, and their growth continues unchecked.

But when a *porous substance* is placed upon the surface of the earth, sufficiently dense to prevent the evaporation of its moisture, and at the same time to admit the free passage of rain and air, two very important advantages are gained, namely, the *preservation* of the riches of the soil, and the *addition* to its fertility by the condensation of volatile manures through the agency of rain, and by the gradual decomposition of the surface soil, through the action of air and water. If the earth is covered *air-tight*, as for example by a solid stack of hay or straw, resting directly upon it, no improvement follows, as would be the case if a pervious stratum merely was laid on its surface. For the same reason, the *subsoil* is never benefitted by the shade of the upper soil, because it is totally excluded from air and moisture. The great advantages of *mulching*, and of mellow cultivation, for fruit trees, are owing to a precisely similar cause ; namely, a *porous surface*, either of litter, or of pulverized earth, admitting air and moisture, and preserving from the escape of the moisture below. Mulching with *old straw*, or with *pulverized earth*, operate alike favorably.

Insects on the Elm.

Messrs. Editors—I see in the Country Gentleman of June 22d, mention is made of an insect found very abundantly on *elm* trees at this place (Hudson N. Y.,) and proving destructive to the foliage, and inquires for a remedy.

The elm trees of New Haven, Ct., ("the city of the elms") have twice been threatened with destruction by the ravages of insects. These were small worms or *caterpillars*, which fed upon the leaves, sometimes entirely destroying them. When they attain their growth they buried themselves in the soil, passed through the *chrysalis* state and came forth as small whitish moths or butterflies, which deposited their eggs in its branches, from which were hatched the worms ready to commence new depredations.

Now of the perfect insects, or butterflies, those of but one sex were furnished with perfect wings and could fly. These flew up the branches, while those of the other sex crawled up the trunk, and deposited the eggs upon the twigs. The trees were saved from destruction by placing a small leaden trough (generally a leaden pipe cut open on one side,) closely around the trunk a few feet above the ground, which was kept filled with *oil*. Through this the insect could not pass, and consequently the eggs were not deposited.

To make it effectual, all the trees should be so treated for one or two years, and any one who visited New Haven in 1851 or 1852, saw them there so guarded.

I state the above *upon the authority of others.* I have never made any observations upon the habits or nature of the insects, myself, although I have often seen them, and the trees so protected. I state this to direct attention to those who know better, and undoubtedly any of the authorities or citizens of that city would give any more information if requested. B. *Ovid, New-York, June* 23.

Irrigation—To Agriculturists.

There is no subject connected with the business of the farmer of higher moment than that of Irrigation. Its importance is manifest from various reasons. Everywhere throughout our land, the great element of fertilization is so abundant and may be made to increase the present and continued income of all cultivated lands so greatly, at such a comparatively small outlay, that it is believed that were the attention of those interested fairly directed to it, they would not be long in deciding to commence the experiment. It need not be called an *experiment.* The thing has been tested ages ago and is still in successful operation in many parts of the old world. Even in the British Isles, where the humidity of the climate would seem to preclude the necessity of such a course, and prevent the beneficial results elsewhere obtained, the work has been prosecuted with decided success. We have found under-draining of undoubted utility, and we may derive greater benefits from Irrigation than has been obtained from under-draining. There are thousands of acres of land capable of producing from one half more, to double what they now do annually by Irrigation, and the expense would in many cases be paid by the increased products the first year.

What investment can the wealthy farmer seek for, that will promise better interest; or what means can the man devise who is struggling to free his broad fields from the incumbrance he was obliged to leave them under at the outset of his purchase, than by executing a judicious system of Irrigation? There can be no mistake about it; in nine cases out of ten it will pay you fifty and even one hundred per cent. You may use guano and phosphates and sulphates but forget not that stimulating element which the God of nature has wisely ordered should be so intimately connected with vegetable and animal life. Bear in remembrance that the small stream that waters your pastures and glides gently through your meadows, may be made to increase the income of your farms sufficiently each year to pay your rates, furnish you with the Country Gentleman, and make good additions to your library; or if need be, relieve the perplexity that some labor under on each returning spring, about the first of April or the first of May,

Let every intelligent farmer who is satisfied, or wishes to be satisfied of the truth of these suggestions, shoulder his shovel and pick and forthwith begin the work. Be assured it is a work in which you will never flag, until you have done all you can do, in the way of Irrigation.

The subject commends itself to the attention of agricultural societies. Every thing held up by them elicits experiments, induces an honest, commendable rivaly and competition. The enterprising farmer who succeeds in producing the greatest amount of butter or cheese from a given number of cows, receives a premium. He who lays the greatest amount of under ground drains, is alike stimulated. Shall we not then in future, Gentlemen of Executive Committees, have the attention of an enlightened community called to the subject, through your means? May you not reasonably appropriate a portion of the funds at your disposal in this direction, to those who succeed best in watering their lands and make 'honorable mention' to such others as you may deem deserving? Lema.

How to Increase the Manure Heap.

Mr. Tucker—In the Country Gentleman of June 8th, inquries are made by a young farmer of Conn.,—one about the best method of increasing his manure heap. I will state a plan which I have seen practised here, and where one is destitute of muck and other materials for absorbents, it answers a good purpose. About the 1st of Oct., plow a piece of pasture or meadow, where it yields the least quantity of grass; cart the turf and cord it into a snug heap, near where it is to be used for bedding during winter, for his stock. If the heap is of good size, and well constructed, it will heat and crumble into a dry powder by the time he wishes to use it in winter. An important requisite in any kind of bedding is that it be in as dry a state as possible, because the object being to absorb and retain the urine of the various animals, every pound of water contained in the bedding shuts out an equal amount of urine. I would therefore advise to keep the heap well covered with straw, or some material to prevent freezing; also a roof of boards to prevent the rains from filling it with water. From calculations made, an acre of grass land will yield 400 loads of turf. Land so treated, should be liberally dressed with manure in the spring, and planted with some crop. Its fertility will then be kept up, besides yielding a large proportion for enriching the rest of the farm.

Respecting spent tan for an absorbent, I would advise him to try the plan. A short time ago, I came across the field of a farmer near here, which was composed almost entirely of fine bark thrown out from an old tanning establishment. It had probably been enriched by the scrapings of hides for many years, and other enriching materials about the works. On this bed of clear tan, was growing a fine thrifty lot of apple trees. The man also stated that he had grown a very heavy crop of corn the past season. Respectfully Yours, Lawrence Smith. *Middlefield, Mass.*

Future Prices.

A "Practical Farmer," in the last *Mark Lane Express*, closes a lengthy article on the above subject as follows:

> Farmers may for once, depend upon having the corn trade for the next year very much in their own hands. There never was a time when the *world's stock of grain* was so nearly exhausted; and one great source of supply—Russia—is shut from us by the war. Why, then, should farmers hurry their next harvest stock to market? Prices must inevitably be good, if they will only be reasonable and cautious; there can be no just cause of alarm. Let every farmer take time. Let the aim be to keep up a fair, steady, regular supply, and he may then rest assured he will receive a fair price throughout the year.

Meat-Market Supplies.

The raising of cattle, sheep and poultry for the supply of our village and city markets, is every day becoming a matter more deserving of the attention of the agricultural community. The demand is becoming more and more difficult to supply, as larger *quantities* and finer *qualities* are being continually sought after. As raising supplies of beef, mutton, veal, lamb, poultry, &c., attracts more and more of the attention of farmers, in like proportion will all information be welcome which furnishes accurate and reliable details as to the most economical methods of fatting and getting ready for market any of the above products. The breed of animals most easily fatted, and the kind of feeding which is at once most effectual and most economical, are points upon which we may yet obtain considerable increase of reliable and useful information.

The following observations from *The Mark Lane Express*, in reference to the past and the future of the business of supplying the demands of the butcher and the meat market man, hold true of this country and the American population, as of those on the other side of the channel, and seem deserving the attention of graziers and others.

Amongst the many permanent improvements in agriculture which have taken place within the past fifty or sixty years, none deserves a more prominent place, or is of greater importance, than the production of meat; it has fully kept pace, if it has not exceeded, the production of grain. We fear not to assert that, taken separately, more *grain*, or more *meal*, is now produced by the agriculturists of this kingdom than was formerly produced by taking both collectively. The introduction of improved courses of husbandry has done very much to effect this, but the attention that has been latterly called forth to the adoption of every practicable improvement of which the business of a farmer is capable of sustaining, has done much more. The growth of new varieties of grain and of roots and vegetables, has done immense good; these assisted by improved culture and artificial manurings, have wrought astonishing alterations and great increase of produce on every intelligent man's farm; but we think these have been exceeded by the improvement made in the breeding, feeding, and management of the live stock of the farm. Contrast for a moment, the cattle of sixty years since—the long, high, thin, lean-fleshed, large-boned, hard, unthrifty animals of that day, with the compact rotundity of shape, the soft, the mellow, thrifty animals of the present day; the former fed at six and seven years, the latter generally fatted the third year, often earlier. The same remark will apply to sheep and pigs, and not less to poultry; early maturity and quickness in fattening have been looked to as the deciding characteristics in every variety of meat-producing animal. In keeping with the improvements that have arisen, and the wonderful accession made to our supplies for animal food, has been the alteration in the tastes and habits of the community. The whole British people have become large meat consumers, so that consumption of animal food has gone on progressively with its increase, and now bids fair to outstrip it; and not only has its taste for animal food become general, but it has assumed a new shape or feature. Beef, mutton, bacon, are looked upon as too common dishes. Lamb, veal, small pork joints, and poultry must now be served up at every table; hence the amazing demand for lamb, calves, small porkers, and poultry; and this will go on and increase, as the habits of the people are becoming daily more refined, and perhaps it is not too much to add, more luxurious.

The Crops at the West.

The following letter came from a reliable source, and expresses the honest opinions of a competent judge; and we are sorry to have to add that its statements are confirmed by representations recently made to us by another gentleman, who had just returned from a tour over a part of the same district. We had supposed the wheat crop much better than estimated by our friends, and cannot but hope that it will yet prove better than here anticipated.

BUFFALO, 27th June, 1854.

MR. TUCKER—Having been on a tour through central and western New-York, as also through part of Upper Canada and some of the western states, I can speak with a certainty respecting the crops. Central and western New-York has a very poor crop of winter wheat, it having been hurt very much by the severe frosts in the end of March, say from the 17th until first April. The wheat was not hove out, but an immense quantity of it killed out-right by frost, and it will be a very small crop. Owing to the late drouth, hay must be a very light crop, and it is selling at famine prices already. Corn and oats may be a good crop with seasonable weather. The weevil in the wheat, about the same as last year. In what I saw of Upper Canada, the crops are even worse than in central and western New-York. In Michigan, Indiana, and Northern Ohio, the wheat is as near a *total failure* as it possibly can be, the weevil having taken nearly all. Occasionally there is a field of Mediterranean wheat, that is pretty good; but very little wheat in those places mentioned, will pay for threshing. I never saw any like it except in Dutches Co. N. Y., in 1842. To commence at the east of Cayuga county, and go west of Michigan and Indiana, there can not be near enough of wheat to bread the people, but there is abundance of old corn. I expected to have found the corn in the west much larger than it is; but farmers in general told me it was as good as it generally is at this season. Their grass crops are very good, and their oats also. I never saw such crops of oats. I want you to put this letter where you can refer to it at any time—you will find it a true account. Yours, &c., AN OLD FARMER.

MINNESOTA.—We are indebted to Col. O. H. KELLEY, Cor. Sec'y Benton Co. Ag. Society, for a pamphlet containing the proceedings of the Society at their annual meeting in December last. It includes the address of Gov. Gorman, and the annual report of the Secretary, Col. Kelley, both of which are valuable papers, and from which we hope hereafter to make some selections for the *Co. Gentleman.* From returns made to the Secretary, it appears that there were grown in this new county, 11,400 bushels wheat—14,065 oats—5000 corn—160 rye—970 barley—299 beans—315 buckwheat—11,000 potatoes—15,370 ruta-bagas and turnips; wild hay cut, last year, 850 tuns, and 3,025 bush. cranberries, and 1,000 wild rice gathered.

Vegetable Physiology—Weeds.

EDITORS COUNTRY GENTLEMAN—Perhaps there is no other item of expense and labor more considerable, in farming operations, besides the actual cultivation and securing of crops, than that of killing weeds, those scourges of the finest farming sections of our country—hence something said upon the subject is always in place, even if not new.

There are but three modes practical, for their extermination, frequent cutting, rooting them out, either by the hand or by the plow, or similar instruments, or choking them out with more luxuriant crops. The mode employed must of course be decided by the circumstances of the case.

All plants, (save the lowest orders and some parasitic plants,) draw their subsistence, their food, from two sources, by means of two very different sets of organs: from the soil by means of the roots, and from the air by means of the leaves. *Both* of these are essential to their well-being, the sap circulating from the one to the other, and any attempt made to kill the plant must be aimed at one or both of these organs. The roots absorb water, and in it are dissolved the various materials found in the soil, the same that are used in building up the vegetable structure, but this sap is not yet ready to perform its ultimate office. It must undergo certain chemical changes, and these must take place in the leaves, under the influence of light and air. A portion of the water is evaporated, the sap becomes thicker, and new substances are formed by the addition of new materials absorbed by the leaves from the surrounding atmosphere, principally carbon from carbonic acid, and nitrogen from ammonia and perhaps other sources. This sap, thus changed, is ready to perform its office, and nourishes the plant, adding to its growth as it passes down again toward the roots. Every one has noticed the change in the sap of the maple or other trees when the leaves begin to grow, in the spring. In many plants, such as the trees and many herbs, the sap passes up through the wood, (the sap-wood of trees,) to the leaves, is then changed, and passes back towards the roots between the wood and the bark. And here the increase of diameter takes place, every year adding a new ring of wood. In other plants, such as canes, grasses, palms, &c., the sap passes both up and back in the interior of the stalk, and here also the increase of diameter takes place. Such plants are destitute of a true bark. The difference of the modes of growth characterizes the two great natural divisions of flowering plants, as described by botanists, but in both cases the relative uses of these organs are the same. The leaves, to perform their peculiar office, have many openings or pores (*stomata*) in their surfaces, to absorb the necessary gases, and also the dew and atmospheric moisture, and they present a very large surface by their immense numbers, opening their myriad mouths or pores to catch the desired materials from every passing breeze, purifying our atmosphere at the same time that they minister to their own wants. To perform their office the leaves must be *green;* they refuse to work when any other color. The colored leaves of autumn, the blanched leaves of plants growing in darkness, and the colored petals of flowers, will not elaborate sap and fit it for use of the vegetable economy. We can judge of the luxuriance of any crop by the relative shade of green it assumes. From their relation to the air leaves have been compared to the lungs of animals, and called the respiratory organs of plants; but the analogy does not hold good in many important particulars, yet they are no less essential to their economy, and we will *always* kill a plant if we keep it entirely deprived of leaves for any considerable length of time.

The ultimate aim of the plant seems to be the perfection of its seeds, and to this end it puts forth all its energies. It is in most vigorous growth at the time of flowering, and many species if they be cut at this time, may be effectually killed. They appear not to have strength to put forth fresh leaves. This in a measure appears to be the case with the Canada thistle. I have known them nearly exterminated by a single cutting, when they were in the proper stage, that is, when some of the earliest heads were just in flower, but the majority not yet expanded; and this operation if performed several times is sure to kill them—the only impracticable point is to cut them *all* and at the right time. The season, too, appears to make some difference, they being easier killed some years than in others. I have known a man to sell "recipes for the sure killing of Canada thistles," for $10 each, in a district troubled much with these pests, and his secret consisted in cutting them twice each year, on the 20th of June and 20th of September. This would kill them entirely, if effectually performed, if not in one year, in two or three. The time should be varied, however, with the season, some being so much earlier than others. All weeds that can be cut, that can not be got at easily in any other way, should be cut two or three times each summer, and there will soon be left few to cut.

But there are many to which this is not applicable, from various circumstances—their size, habits, the grains in which they occur, &c. Such is the case with such as trail on the ground, some that commence flowering very early in the spring, some that are not killed short of cutting a great number of times, as is the case with some troublesome grasses, and others that grow only in certain grains, and are not easily distinguished and separated from them. To these we must apply one of the other methods, rooting them out, or choking them out. Some may be easily exterminated before they become too numerous, by pulling them by hand, and every farmer should be in the habit of plucking up such occasional plants of suspicious aspect as he may meet with on his farm, even if he does not know that it is a troublesome "weed," for some only become so when very numerous. Happy would it be if every farmer was a botanist, to quickly determine and recognize all unusual plants, and a vegetable physiologist, to use the best means for their extermination, if such were desirable.

Often weeds are not suspected to be such until it is too late to get rid of them easily. For all these that it is not practicable to cut, plowing, *good* plowing, or other similar means of stirring the ground, is the way to treat them. In fallow ground, stir it often. Whenever a weed is seen pushing a leaf above the surface, plow or cultivate again, give it no chance at the air, and if the season be a moderately dry one, a single summer is often enough for their effectual extermination. Some farmers prefer this method to all others in killing Canada thistles. All practical farmers understand this part of the subject, as well as the necessity of having it thoroughly done, if we would have it effectual. As to the auxiliaries to the plow, the cultivator, the harrow, hoe, &c., there is much difference of opinion among those having any considerable experience, some preferring one, and some another, according to the weeds they have been dealing with, the soil in which they grow, and other circumstances.

The last method, "choking" them out, (I know no better term to use than the popular one,) is only applicable to some weeds and to some soils, where we can get a cultivated grain with stronger vital power, or having a stronger affinity to the soil, than the weed we wish to eradicate, which by its luxuriant growth, smothers the feebler species, and robs them of their necessary means of subsistence. In all highly cultivated farms, many weeds are partially or entirely kept subdued by this method, incidentally to the increased care in cultivation.

These three methods combined can always be seen on well managed farms, that have weeds, until they are expelled, and that all must be used, is evident to any one who has studied their habits, and the circumstances of their growth.

Many can only be exterminated by years of labor and care, and even then only by the most unceasing vigilance. Such is the case with the common chess, or cheat, (*Bromus secalinus*,) and we need no stronger proof of the tenacity with which it clings to soils, than the fact that many good and observing farmers, entertain the belief that it is transmuted wheat! Its seeds will remain in the soil for many years, and yet germinate when exposed to the right influences, and a few seeds germinating will soon seed a large field. I have seen a piece of new land sown with wheat, containing it, where it took ten years of unceasing attention to eradicate it. It would spring up with the grass of pasture land, and with other grains besides wheat, often of the most diminutive size. I have picked specimens not more than three inches high, bearing a single small spikelet of three or four seeds, which were perfect, and capable of perpetuating the race. Under the most favorable circumstances this same plant will produce as high as two or three thousand seeds. I have met with an intelligent farmer who says that "he has counted" the latter number on a single plant that sprang up in his garden. Under such circumstances is it wonderful that some think it impossible to get clear of this almost universal pest? Especially, too, when so many labor under the mistaken idea that its seeds will not grow, and hence take no pains to keep it out of their barnyard manure. Yet it will yield, if properly attended to, as we have abundant proofs and examples.

Nor is this by any means an extraordinary case of the *flexibility* (so to speak) and fruitfulness of some species. Last summer, in making some investigations upon various weeds I found other cases just as remarkable. Several specimens of the common Mayweed (Maruta cotula) growing by the road side, had from 50 to 150 heads, and a large one, though by no means an unusual large one, bore 305. I counted the seeds in a number of heads, and the average was 173 seeds each. Allow but an average of 100 seeds per head, and we have 30,500 seeds to this single plant. At this rate a dozen plants would seed an acre, and have a seed every four inches apart, or nine on each square foot. Yet this same plant under less favorable circumstances, will assume a very insignificant and feeble habit, so as to be entirely unnoticed by the careless observer. I have seen many specimens less than two inches in height, bearing a single small head, and I have one specimen in my herbarium which grew but three-eights of an inch above ground, or is but seven-eights of an inch long including the root, bearing a perfect, though very small head of flowers!

Among other plants of this same natural order, (Compositæ) I counted and estimated the seeds of several species. On a good sized Canada thistle (Cirsium arvense) I counted 150 heads. This was larger than the average, but by no means an unusually large one. Some of the heads, especially those which flowered late in the season, contained only *false* seeds, and nearly all contained some in this condition, but they contained generally from 50 to 100 good seeds per head. This would give a yield of several thousands per plant, so that when we consider the other means by which it is propagated, its perennial running roots, (subterranean stems of botanists) we have a clue to the cause of the facility with which this weed spreads, and the tenacity with which it clings to its favorite soils. I have seen these roots at a depth of three feet in quite hard subsoils, and (at Ithaca in this state) in a deep sandy soil I have met with them at a depth of ten or twelve feet from the surface.

A common pasture thistle (Cirsium lanceolatum) of large but not uncommon size, bore 350 heads. Three of these heads, not the largest, but above the medium size, yielded respectively 457, 417, and 573 perfect seeds. Allow an average of but 300 seeds per head, and we have over 10,000 seeds for this single plant. This seems like a large number; it is so, but I have seen thistles twice as large as the one noted, and I dare say that many specimens we see in pastures and by the road sides, will yield over 1000 fold.

The common burr dock (Lappa major) bears many hundreds of heads, and 60 seeds is not an uncommon number to find in a head, but it is a considerable above the average.

This great productiveness or range of growth is not confined to the Compositæ, of which I could give many other examples. Among the *Cruciferæ* the wild mustard (Sinapis arvensis) produces many hundreds of pods, each with several seeds, yet I have a perfect specimen but little over an inch high, and I have observed many not over three or four inches high, growing in hard soils, perfecting seeds there to germinate and overrun the field when the circumstances are more favorable.

One more example will suffice. The common mullein (Verbascum thaspus) often springs up so abundantly that some have supposed it "a spontaneous production not originating in all cases from seeds." (I wonder that no one has advanced the theory that it is metamorphosed *wheat;* it often spring sup most abundantly on wheat stubbles that have not been seeded down, or new land, and I know of no law that will change wheat to *chess* that will not carry it farther and produce *mulleins.*) The seeds of this plant are very light, and although not furnished with wings or down like thistles and some other seeds, are easily blown a considerable distance by high winds. They are produced in almost incredible numbers. In August last I noticed one by no means a very large one, still blooming and growing, which would most undoubtedly have grown larger if not destroyed. The main spike of flowers and seeds was about three and a half or four feet long, with three smaller lateral ones. This plant bore about 1500 (as proved by actual counting) fertile *capsules* of seeds, besides many barren ones. The seeds of several were counted under a microscope, and all counted contained over 500 good seeds each; one largeone contained 680. Allow an average of but 400 per capsule, a number I think not too high, and we have a yield of 600,000 seeds on this single plant! At this rate, one plant would seed 14 acres, having the seeds but a foot apart, and a gill sown, producing in the same ratio, would yield over 2300 bushels!

Further illustrations of this kind are needless. I bring up these to show how much a single plant may do, and hence the extreme care with which they should be prevented from going to seed, and also the flexibility of their natures, adapting them to most unfavorable circumstances of growth, yet ready to come forth when these circumstances are changed for the better—and also the necessity of more than one plan of operations to kill them. I would like to say more of the length of time that some seeds will lay in soil and still grow, and also the means of recognizing some of the most noxious weeds, not yet everywhere common, but I have already extended this to an unintentional length. Yours truly, Wm. H. Brewer. *Ovid, N. Y., June* 16th, 1854.

Large Herd of Cattle.—B. P. Johnson, Sec'y N. Y. State Ag. Soc'y, who recently made a tour through western states, says that one gentleman in southern Illinois, has a herd of 1,900 cattle, and that is about the usual number he keeps. They would form an interesting sight arranged in rank and file; and placed closely side by side, as oxen are when yoked, would extend in an unbroken rank of more than one mile in breadth.

Time for Cutting Buckwheat.

Messrs. Editors—Will you do me the favor to inform me at what season of its growth, it is best to cut buckwheat. It continues growing and blossoming with us, long after the first grains are ripe, even after the lower part is brown and the leaves dead, (of course I mean the lower leaves,) I am therefore puzzled to know when it should be cut, as it is seldom sown here, though it both grows well and produces well. Do the lower or first ripened grains drop off or do they adhere until cut? I will be glad of any information relative to the harvesting and preparing the grain for use. J. D. L. *Aiken, S. C., June,* 1854.

It is hard to give a precise rule for the best time to cut buckwheat. The grain continues to ripen successively, and while most of the stalks remain green or succulent, these grains will not drop off. It is therefore best to let the crop remain so long as the amount continues to increase by successively ripening portions. But as soon as the plant loses its fresh appearance, and the first ripened portions are found to separate easily, no time should be lost in cutting. The rule with some farmers in the north, is to allow the crop to stand till the first night frost, and then to cut as quickly as possible, before the shelling process commences. But when frosts do not come early, it is cut before. As soon as the stalks are dead or dry, buckwheat threshes with great ease, but not before; hence the reason that when but partly dried, it is often found so difficult to thresh. At the north, it is usually sown during the early part of summer, sometimes nearly as late as midsummer; if sown too early, the grain does not set so well.

Stock Barns.

Messrs. Editors—A subscriber, in a recent number of your valuable paper, inquires for the best plan of a convenient barn for the accommodation of stock. If not the best, the following description applies to a very convenient one for the purpose designated.

The *width* on the ground should be sufficient for a floor, with stables on each side, running the whole length of the barn, and the *length* should be in proportion to the amount of stock requiring stable-room in it.

Above the stables, the two sides should project from six to eight feet. The object of the projection is to give more room above for hay, stalks, grain, &c., and, at the same time, protect the manure thrown out from the stables below. There should be a cellar under the floor for storing roots; the stable floor may be made tight, and the urine conducted by gutters, at the foot of the stables, into capacious cisterns convenient for pumping into the compost heap. Or, if not wanted for that purpose, the liquid manure collected may be carried out in water-carts and applied by irrigation; whats ever use is made of it, it is more convenient in cistern-than vats under the stables.

The covering should be made tight for warmth, and painted to give neatness, beauty and durability.

Such a barn will certainly accommodate more stock, than the same number of feet of inclosure in an octagonal form as figured and recommended in a late number of the "*People's Journal.*" It may be more convenient to feed stock arranged in a circle, but such convenience is purchased at the expense of waste room at the foot of the stalls. O. C. G

Culture of Buckwheat.

It is best to be sown by the 10th July—three pecks to the acre, on land well mellowed up—sandy soil suits best. It is a bad crop to continue to sow on the same land, without applying any manure. A dressing of plaster and ashes suits best. It is a good crop to ameliorate newly drained land. Such ground can be got in better order for this crop than any other, and the yield is great. Sow grass seed with the buckwheat if wanted for pasture; or, as good a way is to sow oats in the spring, and seed down. Never leave the ground bare, as it impoverishes the soil. Never plant corn after buckwheat, if you expect a crop, and I prefer not to plant it at all; on good land, rye or wheat will do well, as it leaves the land very light and mellow, and clean, with the exception of lots of buckwheat that will come up. By sowing three crops in succession of buckwheat, you will run out every particle of vegetation, and leave the land sour. Would it not be a good crop for Canada thistle ground? G. W. P.

Crowbar—No. 2.

Messrs Editors—Owing to the late snows, followed by the unusual drenching rains, I have not applied the use of the crowbar as much as usual this season; but now planting is done, I intend to improve the few days between planting and hoeing by diging stone and placing them into permanent wall; and I would through your columns, invite my brother farmers, who are occupying rough stony farms, to do likewise. I conceive that every rod of stone wall thus built, adds to the value of the farm in at least two ways, first, by establishing a permanent fence; and second, by the removal of stone from the ground, thereby fitting it for the plow. Last year we built some 70 rods wall, with four feet bottom, 4½ high and 2 feet on top. We do not expect to do as much this. I know this does not tell like going to California to heap up gold, but it is a satisfaction to me to know that my labor has not been spent in vain, but will tell when this generation have passed away. As the ocean is made up of single drops and little atoms form mountains, so will these little industrial performances subdue and thus renovate rough, barren and unsightly farms. Let us keep doing. A. Yeomans. *Columbia, Ct.*

Ventilating Haystacks.

The Rural New-Yorker gives the following as a common mode of effecting the ventilation of haystacks in England and to prevent their heating by fermentation: A large sized English grain-sack, such as will hold some 5 bushels of grain, being 2 feet in diameter and 4½ long, is filled with chaff or cut straw, and placed upright in the center of the stack, which is built round it. As the stack rises, the sack is drawn upwards, thus leaving a hole or chimney in the middle, for the passage of the heated air. An empty salt-barrel, with an iron rod across the tob for a handle, would be likely to suit a Yankee better, and would draw upwards easily if the hay was not built much above the middle or swollen part. This would doubtless be a good contrivance for corn-fodder stacks, which so often suffer for a want of ventilation.

Galls on Horses.

"What is the best cure for sores on horses made by the chafing of the harness? R. M. C." In the first place, see that the harness does not injure the animal—be careful to keep good, elastic, well stuffed collars—if hard, pound and oil them; if the animal is unusually liable to injury, procure camel's hair pads. Be careful never to put the horse te any unusually severe labor. Constant and light service will gradually harden the shoulders. Washing with cold water at the close of working will be both useful and refreshing. So much for prevention. When the skin is much worn or broken, let the animal rest, or pad the collar so as not to touch the sore; the harness may be often drawn so as to lighten the pressure on those parts. A powerful local astringent will often be useful for an actual sore; white lead is common, but sulphate of zinc or white vitriol is better in every respect, an occasional application of which in addition to washing with cold water will generally effect a speedy cure.

Breeding from Broken-Down and Diseased Mares.

This not uncommon practice is one great cause why there are so many horses of unsound constitutions, so ready to break down or take on disease from overworking or other errors in management. True, a horse of the soundest and strongest constitution will break down under bad treatment—such treatment as it pains us to witness not unfrequently;—but the produce of an old diseased mare will break down under bad treatment much more readily than that of perfectly sound and healthy parentage. For example, it is well ascertained that broken wind can be propagated, when either sire or dam is affected with that disease; and that, when inherited in either case, there is a very high probability that when any produce of such diseased animals is put to work, it will soon become thick in the wind, and become broken-winded at an early age. It is poor policy, therefore, to breed from an old broken down or broken-winded mare. Better to shoot the old creature, and breed from a young and perfectly sound mother The colts will be worth enough more to cover abundantly the difference in the cost.

Whey for Pigs.

A neighbor, extensively engaged in the manufacture of cheese, uses the whey of his dairy, with an admixture of meal from corn, oats, and any grain that he has to spare, as feed for his pigs, and thinks that they thrive upon it very much indeed. The meal is sometimes stirred into the whey in the raw state; at other times it is boiled in the whey, making a thin pudding; and at other times still, the whey is heated and poured upon the meal, and then stirred. A little salt is used in the latter modes of preparing this food, about as much as would make a pudding palatable to human beings. Do not many waste their whey? Might not those who make cheese on a large scale, make the raising and fatting of pigs an appropriate accompaniment to their dairy business?

What shall we Substitute for Guano?

The supplies of guano must have some limit. This seems almost self-evident. It did not lead to any practical result however, until this common-sense suggestion was confirmed by the surveys of Admiral Moresby and others interested, by whose computation it would appear that the Peruvian supplies are limited to eight or ten years at the present rate of consumption. This prospective limit to supply, together with more limited supplies even now, is causing considerable anxiety among agriculturists. It is known that some of the deposits of guano upon the Patagonian coast are already exhausted. These circumstances conspire to give interest to the above inquiry.

Another set of considerations also give the above question an additional degree of interest. The adulteration of guano is getting to be a very common practice. Farmers cannot detect these frauds, and therefore it is very natural that they should wish that there were some good substitute for guano which could not be so easily adulterated, or whose adulterations could be more easily detected.

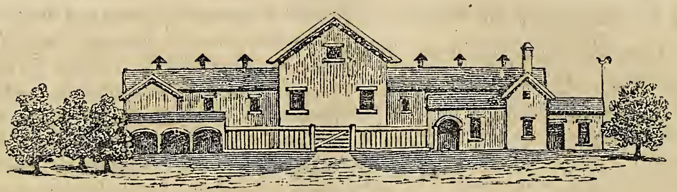
Moved by considerations such as we have just named, the Royal Agricultural Society of England offered, some time ago, a premium for the discovery of a substance equal in fertilizing value to Peruvian guano, and to be sold at or under £5 ($25) a ton. In competition for this premium there have already been lodged over one hundred and forty claims. Those who have put forward these claims are severally confident of the validity and value thereof. And the public, after making allowance for the self-deception of many of the claimants, may still be very confident that, among the many substances offered as a substitute for guano, there will certainly be one or more which will meet the conditions of the premium, and furnish to the farming community something quite equal to Peruvian guano in fertilizing properties, and at the same time to be had at one half the cost. The majority of the substances entered for competition may prove worthless; but still there can hardly be the smallest doubt but that something will be found among the crowd of offered substitutes which may really prove a good one, or at least an artificial manure of high value for the purposes of the cultivator. So much good, at least, will very surely flow from the stirring of men's attention and ingenuity by the offered premium. It cannot be supposed that *all* the claimants have deceived themselves, that not one out of one hundred and forty has succeeded in discovering a substance or composition which will supply ammonia and phosphates at one half the rates at which these are at present supplied by Peruvian guano.

But, even if not one of the substancee offered in competition should stand the severe scrutiny to which it will be subjected; if not even one of them should pass the scrutiny of the preliminary chemical test; if not even one should be found to contain such amounts of nitrogen or ammonia and phosphates as to render it probable that it could ever be equal to Peruvian guano in manurial effects,—still there will be benefits, of no inconsiderable amount, which will arise from the competition for this premium. If, after subjecting the several substances offered to the preliminary chemical test and to subsequent experiments in the field, the Society should pronounce that not one of the many claimants is entitled to the premium—that not one of the substances offered as substitutes for Peruvian guano has fully come up to all the conditions specified by the Society, still an appeal to the public is open to those who do not think they have obtained justice at the hands of the Society—an appeal which will undoubtedly be made by several of the disappointed competitors. This will bring within the reach of the cultivators of the soil several new substances and new compositions at the very lowest possible rates, and they will be able, in the course of a few seasons, to decide what merit is really due to each. Among them there will be found one or more, which, if not *fully* entitled to the premium of the English Society, will, at least, be of great value as a fertilizer, and, taking into consideration the difference in cost or money value, will make a nearer approach than has yet been made to substance manurially equal to Peruvian guano. If it should, at the same time, be an article not easily adulterated, or the adulteration of which could be easily detected, quite a large benefit will have been confered on the agriculturists of Great Britain and of America.

Curing Clover Hay.

The New England Farmer gives the following brief and simple directions, on the management of clover hay, which accord with what has been occasionally before published on the subject. A little experience may be necessary in conducting this management in the best manner; hence if not fully successful at the first trial, this mode should not be hastily given up.

In curing clover hay, the principal value of which consists in the heads and foliage, we have observed, that when cut early and cured in "grass cock," as it is called, the hay possessed a much more brilliant and beautiful appearance than the same quality of grass, cut at the same time, and cured in the open air, or under a free exposure often for a protracted period to the sun. By cutting this grass when the crop is in full blossom, allowing it to remain in the swath the first day after mowing, till nearly night, and then turning it carefully with a fork so as to expose a fresh and unwilted surface to the night dews, and cocking it in the afternoon of the second day, in small compact cocks, of about eighty pounds unmade hay, to the cock, it will make evenly and thoroughly, and may be pitched and even trodden down in mow without being deprived of its heads or finer leaves. The color will be a most beautiful green, and the flowers will be almost as fresh in color as when cut. After cocking, let the weather be fair or foul, no opening or turning, (unless in case of a protracted storm) of the "grass cocks" should be allowed. It is unnecessary, as the hay will "*cure*" completely through, and the outside, when saturated with water, will soon dry off, and effect no harm whatever to the hay. You will never see mouldy hay, if this method is adopted, in "making" or curing it. In forming grass cocks, the fork is preferable to the rake, which is of service only in gathering up the scatterings, and regulating the size and shape of the cocks.



Plan of Farm Buildings.

In answer to repeated inquiries, we furnish the accompanying plan and elevation of a set of Farm Buildings, so arranged that those who have but limited means, may begin with a portion, and add from time to time as means and circumstances may warrant. These buildings when completed form nearly a hollow square, the main building or barn being in the centre of the further range. This forms a sheltered yard for the domestic animals, in the centre of which is the manure or compost heap, occupying a hollow to prevent the escape of the liquid manure. The cleanings of the stables are daily conveyed to this heap by wheelbarrows.

Fig. 2 is the plan of the whole when completed, as it lies on the level of the ground. Fig. 3, is that portion of the barn situated immediately over that part represented in fig. 2, which is banked up with earth, or dug in the ground, so that the further part of this ground plan shall constitute a cellar for roots, and a space for cutting roots, straw, &c. adjoining it. The curved dotted lines show the wagon-track on this embankment for entering the floor in fig. 3, lying directly over the cutting-room. The root cellar is furnished with two broad, hopper-like troughs, passing through the cellar windows, into which the cart loaded with roots, is "dumped," in filling the cellar.

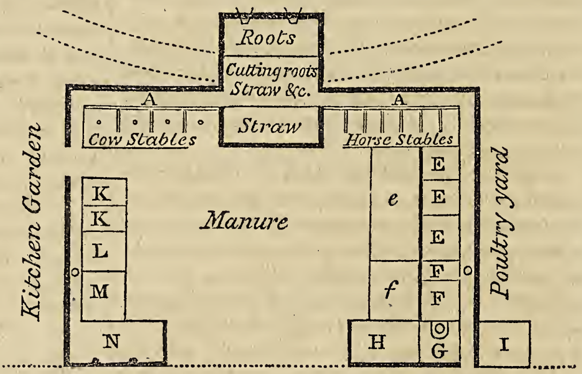


Fig. 2.

By building *wings* for the horse and cow stables, (as the plan exhibits,) the central part or barn need not be so large as ordinary barns, saving much heavy timber in the frame, and assisting in forming the hollow square as a shelter.

On the second floor, Fig. 3, G is the granary, and C the corn crib, both of which are filled from the floor and may be unloaded directly into a wagon under them in the yard below, or drawn off through a shute for the horses in the stable. The bay for straw extends upwards as high as the top of these granaries, over which is a space for unthreshed grain. The horse power of the threshing machine, if a common movable one, is placed on the ground outside, and as soon as the grain is threshed, the straw is conveniently deposited into this bay, perfectly secure from injury by weather. The better way is for every farmer to have his own horse power and thresher, that he may employ his time whenever most convenient. The best two horse endless-chain power, will occupy but little room in "space for cutting roots, &c." from which a band may run up to the thresher on the floor above. This power may be used with perfect facility likewise in cutting straw, slicing roots. winnowing, sawing wood turning grindstone, &c.

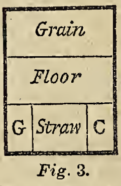


Fig. 3.

The roots lying on one side of this space, and the straw on the other, contribute greatly to the convenience of using them; and as soon as prepared by cutting, the feed is given to the animals on either side by means of the alley A A.

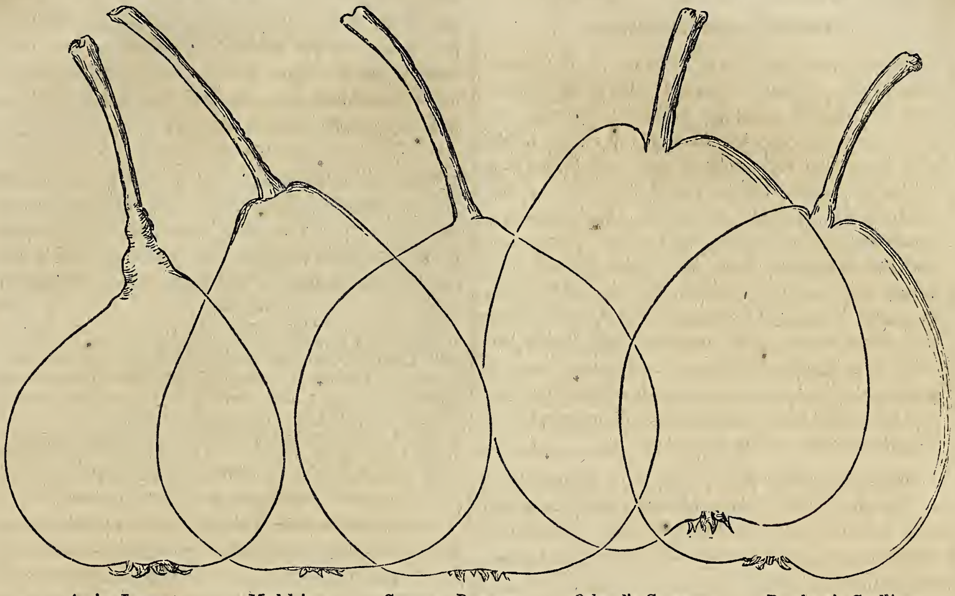
It will be perceived that the barn is occupied with grain and straw, while the spacious lofts over the stable are filled with hay, which is thrown down to the animals below as wanted.

The building and its two wings, now described, may be built first; and the addition hereafter mentioned, may be added afterwards.

These additional buildings may be occupied by sheep sheds at E E E, with an open sheep-yard, *e*; by piggery, F F and pig yard *f*; cooking room, G; house for seasoning stove wood, H; poultry-house, I; calf-houses, K K; workshop L; tool-house, for plows, harrows, rakes, &c. M; wagon-shed, N.

Every part of this range of buildings is entered from the lawn back of the house, by the dry and sheltered passages O O and A A, from which all the animals may be examined, instead of the more common way of wading through the mud or manure of the yard.

The floors of the hay loft, over the stables, should be made tight, to prevent the vapors from the stables tainting the hay; and ventilators, made of square board-tubes, placed over the stables and running up through the roof. Their openings are made to open and shut by sliding boards, according to the weather. The tops of these ventilators are shown in the elevation.


Amire Joannet. Madeleine. Summer Doyenne. Osband's Summer. Dearborn's Seedling.

The Early Summer Pears.

Many new pears have been introduced of late years, but very few have proved equal to the best old sorts. There are a few however of great value and excellence, and among them we may name the *Summer Doyenné* (or as the modish writers will have it "*Doyenné d'eté*,") which first became well known about five years ago. The *Tyson* and *Osband's Summer*, (American sorts) have been much longer cultivated, but are not yet widely known. The *Ott*, which has proved a most delicious fruit at Philadelphia, its native locality, has not been proved further north; and should it deteriorate in New-York as much as the Lodge and Pennsylvania, it cannot stand among the first. We hope however it may, like the Seckel, to which it approximates in character, lose none of its flavor when carried to a colder region.

We believe that an occasional review and comparison of the old and new fruits, may be of use to those who wish to perfect their selections, and we therefore give at this time, figures and brief notices of a few of our early varieties, intending a continuation in future.

Amire Joannet. This is a third-rate pear, both in size and quality, but as it ripens at least one week before any other sort, being about one week earlier than the ripening of the wheat crop, it is cultivated by amateurs on account of this extreme earliness of maturity. The tree is an upright grower, and a great bearer, the fruit small, roundish-turbinate, with a red cheek, and a rather sweet, dry flesh. Its ripening should be completed in the house.

Madeleine. This has been long known as the finest very early pear, and still remains so, although for the last few years, the Summer Doyenné has been closely contending for rivalry. The Madeleine ripens with the wheat crop, is a medium sized obconic-obovato fruit, with a pale yellowish-green skin, and a very juicy and melting flesh; and with an agreeable and refreshing flavor. It should be picked a day or two before full maturity, and ripened in the house. This treatment should apply to nearly all early pears, and it is of great importance where any disposition to rot at the core is observable.

Summer Doyenne. This is a beautiful red-cheeked pear, ripening very nearly if not quite as early as the Madeleine, and is fully equal to it in flavor although not possessing its peculiar refreshing quality. It has been much raised on quince stocks, but is found to succeed rather better on the pear.

Osrand's Summer. A variety which originated in Wayne county, N. Y., and is noted for its fine flavor and handsome form. It is a good bearer, but never is loaded with heavy crops. The tree is very vigorus, rather upright, and succeeds well on the quince. It ripens a few weeks later than the preceding. Its size is medium, form obovate, very regular, usually with a handsome red cheek, and when house ripened, often with a fine buttery and melting flesh, and a perfumed excellent flavor. There is a spurious sort, much resembling this in form, but inferior in quality, with thicker shoots, and more curled and glossy leaves, ripening at the same time, and which appears to have originated in the same neighborhood.

Dearborn's Seedling. Another American sort, well known throughout the country, for its uniform excellence in all seasons. It is too small to be very popular. The growth of the tree is free and rather upright, and usually bears heavy crops. Every amateur should have it. It appears to grow well on the quince. It ripens nearly the time of the preceeding.

We intend to continue these notices of early fruits.

Inquiries and Answers.

Germination of Cherry Stones. (S. I. Logan, *Washington, Conn.*)—The stones should be washed from the cherries when the latter are fully ripe, and as soon as the *surface* has dried in the shade, mixed with more than their bulk of sand, and buried in a shallow pit in the earth, covered first with flat stones, and then with a few inches of earth. Here they may remain through the winter; but the first moment that the frost disappears from the ground the following spring, they are to be taken out and planted in drills. They may be planted in autumn; but the soil settling hard about them, is apt to prevent their growth, unless it is of the lightest character. Freezing tends to remove the shell, and assist germination. The Mazzard makes the hardest stocks, but the improved heart varieties succeed well in most cases.

Evergreens for Protection.—(A Subscriber.)—Any kind of evergreen trees will answer, provided they grow rapidly and tolerably dense. Our correspondent may procure such sorts as are most accessible among the native trees, and intersperse Norway firs pretty freely from the nurseries, with some silver firs, Scotch firs, and other exotics. The native white pine grows rapidly, and is a beautiful tree—the Norway grows still faster—the hemlock, when grown in open ground, is unexcelled in appearance, and is a fair grower. Summer breezes are more apt to be cut off by too large a proportion of deciduous trees, than by any amount of evergreens likely to be employed. Our correspondent will please remember that in transplanting, the great secret of success is to carry a good solid cake of earth (unfrozen is easiest) on the roots of each tree.

Crawford's Early and Jaque's Rareripe.—(J. A. Donaldson, Ravenna.) Crawford's Early is usually a few days earlier than Jaque's—sometimes they ripen together. Crawford's Early is superior to this, and to nearly every other sort, by its uniform productiveness in every part of the country.

Selection and Management of an Orchard.—(A Beginner, *Islip, L. I.*)—Our correspondent will find all the needed information on this subject, which is rather too extensive for an article in our paper, in the *American Fruit Culturist.*

Width for Walks.—I believe that you reccommend, somewhere in the Cultivator, having the main path or paths in a garden, 5 or 6 ft. wide. Why would not 3 ft. wide answer all purposes as well as a greater width? O. P.

For an *ornamental* garden, and especially for one laid out in the modern style, main walks less than 5 feet wide would look cramped and meagre. For a parterre (or small group of geometrical beds) many may be much narrower.

A *kitchen* garden, whose appearance is of small account, may have the walks of any convenient width.

There are many gardens with a sort of mixture of the ornamental and geometrical, with the kitchen garden—with broad alleys across the middle, flanked with straight flower borders. We do not admire this arangement, but when adopted, the main or central walks never look well unless at least 6 or 7 ft. wide, and very smoothly and neatly kept.

Lawton Blackberry.—(J. J. Swan, *Pa.*) We know of no one of whom this variety may be procured except of S. P. Carpenter, New Rochelle, West.Co., N. Y. Knevett's Giant Raspberry, and Muscat of Alexandria grape, may be had of the principal nurserymen.

Distance for Melons, &c.—I perceive that Buist and others recommend to plant Melons in hills 6 ft. apart; and leave 4 plants in a hill; but I plant mine in hills 3 ft. apart, and leave 1, only in a hill; which do you think the best practice?

What is the reason that wild strawberries, when cultivated, will bear no fruit? This has been my experience, though I have heard of some that have succeeded. One Who Admires the "Cultivator."

Without any decisive practical experience, we should prefer the mode described by our correspondent, provided the soil is equally easy of preparation, planting, and cultivation. On a uniformly manured surface, it obviously possesses the advantage of a more even distribution of roots through the soil, and of plants over the surface of the ground. Artificially manured hills are sometimes more conveniently made as recommended by Buist.

We cannot answer the inquiry relative to the strawberry, without more knowledge of the circumstances—have any of our correspondents observed similar results? In the few experiments we have witnessed, we never saw any increased sterility

The Apple-Worm.

Is he alive or has the severe winter destroyed him? Unless we get deliverance from this enemy in some way our apple crops will soon be alarmingly small and unsound. This insect seems to be more and more prevalent every year for some seasons past. The *habitat* or hiding place of this animal during the winter, and its habits, do not seem to be sufficiently understood to suggest an effectual mode of warring with it. We have not been fortunate enough to hear of any mode of preventing its depredations having proved reliably or extensively successful. If any of our readers should think they know of any such successful mode of defence against the destructive attacks of this moth, the public would gladly hear from them; and if their method should prove generally successful they would be hailed as *ingenious* and fortunate discoverers, and yet more, as *public benefactors*. The discovery of a mode of prevention would justly entitle any man to the credit of great ingenuity or great good fortune, for many have tried it and failed; and that would certainly be a public benefit, which would save thousands of bushels of apples from destruction, and which would save apple-eaters from wormy apples,—certainly an almost intolerable, a patience-destroying nuisance. *

Horticultural Review.

The Cincinnati Horticultural Review for June, contains, among other excellent things, three beautifully executed lithographic plates, representing the residence of W. B. Smith, Esq., near that city. Two of them are perspective views, and the third a plan of the grounds; and, like all other well executed representations of finely planted grounds, they convey more correct views of the modern improved style of grouping trees in artificial landscapes, than volumes of descriptions. We are satisfied, that next to seeing the places themselves, well executed views of the most correctly planted residences, will do more than any thing else towards correcting the taste of the public in these matters.

After this high commendation, a word or two of criticism will be allowed. We observe here the common defect of many *American* residences, of placing the best part and nearly all the grounds between the house and the public road—as if the most highly ornamented part was intended quite as much for the public to gaze at just as they get in front, as for the comfort and delight of the inmates. In this particular instance, it may have been necessity that placed every thing on one side of the residence. Contrast this, however, with Loudon's description of *Cheshunt Cottage*, as published in the Appendix to Downing's Landscape Gardening, where the family can enjoy many beautiful retired walks, without being gazed at constantly by a street full of passengers,—and we cannot but think that the great leading idea of our countrymen prevailed in its design, namely, that of having but one fair side, and in placing this fair side always towards the public road. We see this in almost every thing, from the New York City Hall, with its marble front, and sandstone rear, to the fifth-rate farm house, with its white face and picket fence yard against the highway, and its Spanish-brown and pig-yard rear. Another point we observe in this plan, is the unobstructed lawn extending directly from the entrance to the house, while the road deviates abruptly. The temptation to run directly across the lawn is too great, and should be removed by planting at this point of view. A third objection is the three long-legged weeping trees, placed in a very conspicuous position. The mania for these distortions of nature should not enter a finished landscape. The only weeping trees admissible, are those of a full, rounded, free and luxuriant growth, whose branches sweep the ground, as in some of our finest elms. With these few exceptions, (and we should not have taken the trouble to mention them, had not these engravings been otherwise of uncommon beauty,) the plan and groupings represented, afford many valuable hints and suggestions to such as are about to plant new residences, and a little criticism now and then, is quite as useful as positive instructions.

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Mats for Schools, &c.—Nearly every kind of mat has been tried in the public schools at Columbus, and the rope mats, (made of oakum,) are found the most durable. So says the Ohio Journal of Education.

Fruit Culture.

As the growing of fruit is becoming quite an object, not only for family comfort, but also as a source of profit, too much care and attention cannot be given to young trees, in the present condition of our old lands, which have been under cultivation such a length of time. When our country was new and rich, large orchards were planted, and grew rapidly with little care except an occasional trimming; but a great change has taken place. Long cultivation has deprived our land of its natural richness, and according to some has robbed the soil of some of the most essential ingredients required to produce a good growth of trees. Be that as it may, a few years of experience in attempting to grow trees on an exhausted soil, will convince any one of the utter folly of attempting to raise fruit trees on such soil, without high cultivation and unremiting care and attention. I would as soon think of planting my corn without cultivating it afterwards, as to plant trees and take no more care of them.

No doubt much depends on having the trees properly set in the first place; but let that be done right, the tree will not flourish unless it is highly manured and otherwise cared for. Some shorten down the heads of the trees before planting, alledging it to be necessary so as to make the top correspond with the size of the root and thereby insure the life of the tree; but a little experience has convinced me that this practice is wrong, and calculated to injure the tree and retard its growth. Three years ago last fall, I procured some trees, having the largest tops I had ever seen; at the time of setting, I took but few limbs from them; set them in holes enriched by manure, and have manured them several times since. They have made a rapid growth, and are now in the most flourishing condition of any orchard with which I am acquainted. My trees, or a part of them, are near the wash-house, from which our soap-suds are carried and turned on the roots of the trees. We also wash them several times during the season with soap-suds, and sometimes with weak lye. This keeps the bark smooth, and prevents moss from gathering on them.

No lazy or indolent person ought ever to plant a tree. They require constant care and watchfulness to keep them in a healthy and thriving condition. Young trees have many enemies to contend with. For the last three years, the drouth has been a serious drawback in the growth of young trees. New insects and worms heretofore unknown, at least in this vicinity, have attacked them, and in spite of all our efforts have done them considerable damage. No worm ought ever to be allowed to remain long enough on a tree to make a nest or eat the leaves. Two years since, a worm, about an inch in length, smooth body with yellow rings around it, attacked the young trees. They were to be found in clusters of a dozen or more in the under side of a leaf, and would sometimes in one night eat most of the leaves of a tree; but they made no nests, and when once found, were easily destroyed. The old ancient appletree-worm, is the only one we have had to contend with this season, and they in small numbers. In dry seasons, trees of one or two years growth, should be occasionally watered in order to keep them in a growing condition. I have practiced this with good success.

Some attention to trees is wanted in cold as well as warm weather. Many who have young orchards, will remember the snow storm of October last. While the leaves were green on the trees, they became loaded with snow and ice, and the consequence was an immense number of trees were nearly destroyed. I perceived what the consequence would be, and went to every tree thus loaded with snow and ice, and shook it off, and thus preserved my trees from destruction, although before I commenced they were so much bent by the weight of snow that the tops came in contact with the ground. Out of about 200 trees, I discovered but one small limb broken.

I would like to know what kind of trees are best suited to our climate in this latitude. Will some of your readers give their views from personal observation? My Rhode Island Greenings so far have made the most vigorous growth, and appear the most hardy, and both last year and this have borne a considerable number of apples. The Baldwins are nearly as large, but do not look so hardy, and have as yet borne no fruit. Of nine or ten other varieties, the growth and appearance are quite different. I give this description of my trees, for the purpose of calling the attention of others to the subject, who have more experience in the business than I have, and also more time and talent for writing. As to the theory of planting and taking care of trees, we have been pretty well instructed; what we now want is the experience of sensible men, whose knowledge has been obtained by actual experiment. Those who possess the knowledge which would be useful in instructing their brother farmers in their laudable efforts to improve the cultivation of fruit, and publish the same in your papers, would receive the thanks of many readers of the same. W. M. C. *West Hebron, Wash. Co., N. Y.*

Remedy for Poisoned Sheep.

One of your correspondents asks what is good for a sheep when poisoned from eating some vegetable poison—(I presume hemlock, wild parsnip root and other kindred poisons.) Doctor Banks uses a mixture of about three parts chamberlye to one part liquid camphor. Drench soon as the sheep gets down. When the camphor is not at hand, he sometimes uses the urine alone. He has cured cases for me that I regarded as hopeless. There can be no harm and not much trouble nor expense in trying it. All that try it as successfully as I have, will hardly ever try anything else.

Were the above remedy universally used, and the Doctor and myself to have one tenth of the sheep saved by it, that otherways would die from ordinary or scientific treatment, I have no doubt but we should soon have means enough to pay for several head of my Friend Jewett's French Merino sheep, which we very much need in this section of country. *Henderson Co., N. C.*

French Names to Fruits.

The Prairie Farmer denounces these, and proposes reform. A great many of them may as well be reformed or removed as not, it is true; but some of them will stick fast, in spite of all the editors and conventions in the country. We shall have to bear them just as we do such barbarously pronounced French words as *apropos*, *depot*, *beau*, *amateur*, *boudoir*, *reservoir*, *unique*, *souvenir*, *debut*, *eclat*, *corps*, *bureau*, and fifty others, which most people manage to get through their lips without many wry faces. There seems to be no remedy for *Angouleme*, *Aremberg*, *Clairgeau*, &c., but why should we retain the prefix of the word "*beurre*" to some forty or fifty varieties, when in fact this is no designation at all, for hundreds of varieties, including nine-tenths of the whole list of pears, possess more or less of the *buttery* character. We cannot see any advantage the name *Beurré d'Aremberg* (or as the *would-be* modish so often blunderingly have it, "Beurre *de* Aremberg") has over the simple appellation, *Aremberg*; or that Beurré Bosc and Beurré Diel, have over the simple names Bosc and Diel. *Unnecessary* verbiage, especially in French, ought to be repudiated.

Live Braces for Fruit Trees.

Every fruit culturist knows that crotched trees are frequently split apart and nearly ruined when loaded with fruit. I have found by experience that this can easily be prevented by putting in a live brace or stay when the tree is young, to fasten the two prongs or stems of the tree together. It is done in the following manner: Take a small branch of one of the main stems, growing between the two, and cut off the top end slanting, similar to a scion prepared for lap grafting; then make an incision on the opposite stem with a sharp-pointed knife or small chisel; then insert the top end of said branch and tie it down firmly with a woolen string; then cover the wound with grafting wax, and the work is completed; remembering to cut the string as soon as the brace has grown fast, to prevent it from girdling the tree. This is the best operation for crotched trees that I have ever seen tried. ELIHU CROSS. *Hoosick, Rens. Co., N. Y.*

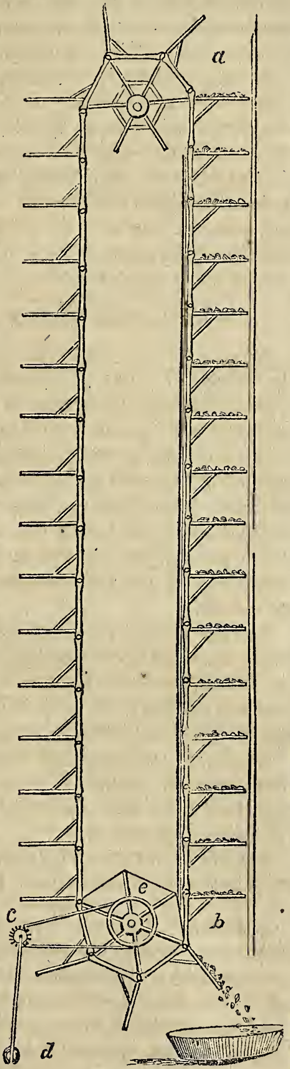
The Shakers at Niskayuna, have practiced a system of connecting the branches of fruit trees, something like that described above, for years, and we should be greatly obliged if some one of them would furnish us with a description of their process, with the benefits derived from it.

BUDDING ROSE BUSHES.

I take this way to inform all persons who have a taste for raising flowers, that they can have as many varieties of roses as they wish, growing on the same bush by budding it in July or August. The operation is very simple and is performed in the same way as in budding peach and pear trees. I tried the experiment last summer on my rose bushes with success. ELIHU CROSS. *Hoosick, N. Y.*

Drying Fruit.

It has been observed that the amount of peaches consumed in a single week in the city of New-York, exceeds the total consumption of fruit in Great Britain throughout the entire year. The sales of perishable fruits are rapidly increasing throughout the country; but there is one serious drawback to their extensive cultivation,—that is, the necessity of crowding them into market at the critical period of their maturity, so that twenty-four hours' delay shall not witness their destruction by decay and fermentation, and result in their total loss. Hence the immense superiority in this particular, of long-keeping sorts,—which may be deliberately secured and held in market for many months, till the best time shall be selected for their disposal.



FRUIT DRIER.

But there is another important avenue to market for the perishable fruits that is at present almost unknown in its perfected form. We allude to *preservation by drying*. Every farmer *thinks* he has seen dried apples and peaches, *but not one in a thousand has seen them*—properly so called. That which usually appears under this name, consists in the first place, of a selection of such inferior, poor-flavored fruit, as can be used for nothing else;—this is imperfectly pared, leaving a due proportion of skin and core remaining, and is then variously subjected to partial decay, smoking, drying, &c., forming when completed a singular medley of all colors from brown to nearly black, and with nearly as various an intermixture of flavors. Those who wish to see dried fruit in perfection, must remember that a poor-flavored sort before drying, can never by any ingenious process become finely flavored afterwards. The very finest varieties must therefore be first chosen. The process of drying must then be so rapid that no decay nor even discoloration shall take place until the operation is completed. Our climate is too precarious to think of drying fruit properly in the open air, even for the earliest varieties. Some artificial arrangement for the purpose must therefore be devised.

The great leading defect of all the plans we have seen for drying by fire-heat, is *a want of circulation in the heated air*—a deficiency in rapid ventilation. A high temperature is given by means of stoves to a close apartment, the air of which in a few minutes is heavily charged with moisture from the fresh fruit, and a sort of steaming, stewing, half-baking process then commences, producing after a long delay, an article far different from that of a perfectly dried, finely flavored fruit. A free circulation of air, kept dry by a continued fresh supply, would accomplish the work in far less time, and at a much lower temperature; and consequently retain in an incomparably more perfect manner the original characteristics and color of the fruit.

In order to make a beginning in this matter, and to assist in the erection of good, cheap, rapidly-operating, and perfect fruit drying establishments, we present to our readers a figure and description of an apparatus for this purpose, which although never patented, we believe to be far more valuable than many machines not thus thrown open to the public. Its peculiar advantages will be obvious as soon as the description is examined.

It consists of a tall upright shaft, *a b*, represented in the annexed section of the apparatus, through which passes an endless chain, made of a number of strong frames, securely hinged together at their corners. This chain should be strong enough to bear several hundred pounds without breaking. At every joint it is furnished with a braced shelf, each consisting simply of a square frame furnished with coarse twine-netting, like a sieve. This endless chain with its series of sieves runs over an angular wheel above and another below, precisely like those of a common chain-pump, but wide enough to receive the full breadth of the chain. Its motion is quite slow, descending from *a* to *b* on one side, and rising on the other, and is accurately regulated by means of the pendulum *d* connected to the notched wheel *c*, by means of an escapement like that of a common clock, but made very strong. A strong and broad India-rubber band connects the axle of this wheel to the drum *e* on which the chain runs. As the chain is loaded with the drying fruit, and is therefore quite heavy, it must not, and indeed cannot be subjected to the successive vibrations of the clock work—these vibrations being broken and destroyed by the India-rubber band.

The whole apparatus being ready for operation, heated air from a stove and drums is made to pass up through the shaft *a b*, being let in at the sides at *b*, and confined to this shaft by the drum *e* being made light, and fitting closely without touching in its revolutions. A person with the freshly cut and pared fruit stations himself at *a*, and as each successive shift or sieve slowly descends, spreads a single layer over them. They operate like the weight of a clock in keeping up the motion of the pendulum; and the velocity of their descent is accurately regulated by means of the relative sizes of the wheels placed on the axles of *c* and *e*, and also if necessary, by using different lengths for the pendulum rod.

☞ The great advantage of this contrivance is the following: The dry and freshly heated air first enters the bottom of the shaft at *b* and strikes the fruit when the drying process is nearly finished, and completes it; as this air rises, it receives additional portions of moisture from each successive shelf, until finally it passes off at the top,—the driest portions being needed at the bottom, to complete the process, and those most charged with vapor only coming in contact with the freshest fruit at the top, where only it could be useful.

The velocity must be so regulated, by experiment, (according to the height of the shaft, heat of the air, and time required for drying,) that the drying process shall be just completed by the time the fruit reaches the bottom, where it drops off from the revolving shelves into baskets or boxes placed there for this purpose.

This apparatus may be placed in a tall narrow building erected for the purpose, and built cheaply by vertical boarding on a wooden frame, to the whole of which a handsome architectural exterior may be imparted by giving it the aspect of a square Italian tower or campanile.

An apparatus of this sort will dry fruit with great rapidity, certainly, and independently of the most unfavorable changes in the weather; and it will come out white, clean, and perfectly dried, retaining all the peculiar flavor of the fresh fruit, and prove incomparably superior to the common half-decayed, smoked, imperfect article. When known, such dried fruit must command almost any price in market. Drying establishments, well managed, would give a great impetus to peach planting in this country; and we unhesitatingly predict a large trade in the finest dried peaches in European markets, to which they can be so cheaply and safely conveyed, and where, as fresh peaches cannot be easily obtained, they cannot fail to be very highly appreciated.

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Black Warts on Plum Trees.

I have come to the conclusion that this disease in plum trees is contagious; therefore if it is not checked at the commencement, it will soon affect every tree in the orchard, and in a short time destroy them. The best remedy that I have tried is to cut off the branches affected, as soon as the disease makes its appearance. These warts made their appearance on my plum trees about ten years ago; I immediately cut off all the branches affected, and burned them; the trees then affected, are now in a healthy condition. If the warts should make their appearance the next year, the same practice must be persisted in, for without perseverance we can not expect much success in any undertaking. ELIHU CROSS. *Hoosick, N. Y.*

The Wheat Weevil.

NEAR GENEVA, June 30, 1854.

DEAR SIR—I find on inquiry through this county and those adjoining, that the weevil or wheat midge is not near so destructive to the wheat this year as last, and last year not half as bad as the year previous; yet owing to the remarkable hard weather the latter part of March, wheat, over the whole of western N. York, is a very thin crop, and much of it entirely worthless. The recent drouth, say from about the 25th May, has had a bad effect upon the wheat as well as other crops. My forty acre field, that I plowed after harvest so very deep, and sowed with wheat from the 11th to 14th Sep. to last, with once plowing, did not show as well last fall and this spring as some wheat on other farms. This was undoubtedly owing to the very deep plowing; but latterly, during the whole drouth, it grew luxuriantly; and now I don't think there is the same quantity of Soules wheat on any one farm in 100 miles to surpass it nor to equal it. While other fields failed from drouth, it did not appear to suffer so much for deep plowing. Hay, oats and barley, must be a very short crop. Some few showers of late, have been greatly in favor of the corn crop, but on clay soils it came up very badly. JOHN JOHNSTON.

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"Is the First Milk Poisonous?"

MESSRS. ED'RS—In the 77th number of the "Country Gentleman," you copy an article from the "Maine Farmer," showing the first milk of the cow to be poisonous to swine at least. But they are not the only animals capable of being injuriously affected by the injudicious use of the first secretions from the udder of the cow. One of the worst cases of colic, simulating inflammation of the bowels, that it has fallen to my lot to prescribe for, occurred in an Irishman, which was caused by a copious draught of the first milking of the cow.

The first secretions from the udder, contain *Colostrum*, the properties of which are not yet fully known; but it is supposed to be a cathartic, provided by nature and well adapted to the wants of the offspring, removing the viscid contents of the intestinal canal.

Diarrœha, convulsions and death, have been produced in young children, by the too copious and long continued secretion of *colostrum* in the mammal secretions of their mothers.

Colostrum is not a secretion peculiar to cows, neither is it poisonous to swine alone. O. C. GIBBS, M. D.

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SPLENDID SPECIMENS OF THE MAGNOLIA.—A late number of Hovey's Magazine, in giving an account of the specimens of the magnolia growing on the grounds of John A. Kenrick, which are admitted to be the finest in the vicinity of Boston, states that a tree of the M. Soulangiana produced from 1500 to 2000 flowers the present season, and a plant of the Conspicua produced 3000 flowers. When the large size and the rich and showy appearance of these flowers are considered, our readers may form a faint idea of the splendor of a tree covered with them.

Chemical Elements of Food.

The subjoined Table, showing the relative proportion of the elementary bodies in some of the principal articles of food, may be of use for reference, and may serve to explain some facts, such as the following: We know a family, the husband being English and the wife of Dutch descent, who have long been remarkable for two things: 1. For their unusually healthy and muscular frames and the great amount of work which they perform: and 2. For their eating cabbage every day in the year, except perhaps for a few weeks in summer. The table shows that cabbage contains nearly as much nitrogen as beans: and it is well known that beans and other nitrogenous food favors especially the growth of the muscular system:

DRIED AT 230° FAHRENHEIT.

	Carbon.	Nitrogen.	Oxygen.	Hydrogen.	Ashes.	Water lost in drying.
*Wheat, ...	46.1	2.30	43.40	5.80	2.40	
Beans, (haricot,)		4.30				7.9
†Cabbage (hearted,)		3.70				92,30
†Grass, (hay,)...	45.80	1,50	38.70	4 99	9.01	
*Mangold wurzel	42.80	1.70	43.40	5.80	6 30	
*Potatoes, ...	44.00	1.50	44.70	5 80	4.00	

*Boussingault. †Thaer.

Preservation of Manure during the Summer Months.

This is rather too generally neglected, judging from the number of exposed manure heaps which may be seen along all our roads. The cleanings of pigsties, of stables, &c., are thrown down where it may be most convenient, and there left exposed to the destructive or wasting influences of wind and rain. By such treatment the manure heap will soon lose all its virtues. The great superiority of covered over uncovered manure was recently made manifest by a report of some experiments made with each. As it requires, however, considerable time and expense to provide a place of shelter for the manure of the stable, the pigsty, and the cattle-yard; and as some may be induced by the article referred to, or by other considerations, to take some more care of their manure than hitherto, but who have as yet no shelter provided for it from sun and rain, we would suggest a method which may be practiced by almost any one. Set four, six, or eight posts in the ground in or on the edge of the yard or by the side of the manure heap, so as to have something like a wagon shed with the roof sloping, if possible, to the south. It may be about ten feet wide, if to be covered with 12 feet boards or slabs; or double this width so as to permit a wagon being driven into it or through it, to carry off the manure, if the roof be made to slope both ways. Let the shed or shelter be boarded up on three sides, leaving it open only on the north. Let the manure from all quarters be wheeled to this, laid down in a row or heap running the whole length of the shed, and made as firm as possible by slapping with the shovel, &c. Near by should be a few loads of muck from a ditch, or earth or dirt of some kind, a layer of which should be thrown on each successive layer of manure. By this means the manure will be kept from sun and rain, and at the same time the gases which are apt to escape during the heats of summer, even under shelter, will be absorbed by the mucky or earthy matter which is put on the manure—a little over each days addition or layer. Let those who think all this would not pay, try it.

The Housewife.

CURRANT WINE.

Mr. D. D. T. MORE, of Watervliet, furnishes us the following recipe for making currant wine:

To one quart of currant juice, add three quarts of water and three pounds of the best white sugar. Let it stand four or five months, until all fermentation is over, after which it may be bottled, and will soon be fit for use. Wine prepared in this way will keep for years. While fermenting, it should be left open—if in a barrel, the bung should be left out.

Mr. More informs us that wine may be made from the black currant by the same recipe, and also that a very palatable drink may be made from the tomato, by using the same proportions of juice, water and sugar.

TO DESTROY BED-BUGS.

MESSRS. EDITORS—We have made use of the following simple, yet efficient means of destroying bedbugs and similar vermin, for several years, and found it to be complete in its extermination.

Remove from the room every thing which is not infested; then take a small quantity of sulphur and set it burning in an old kettle, keeping the room closed tight until the smoke has all disappeared. After this, thoroughly ventilate the room, and the smell of sulphur will all pass away. D. C.

MINT SAUCE.—Many of our country friends do not know what a luxury they deprive themselves of when they eat lamb either boiled or baked, without *mint sauce*. Set a few roots of spearmint in one corner of the garden, and they will soon furnish an abundant supply. Strip off the leaves and chop them fine, add an equal amount of sugar, and cover the whole with vinegar. A small tea-cup full of the mixture will be sufficient for a large family. Try this and see if it is not far preferable to greasy gravies.—*Ohio Cult.*

TO BOIL RICE.—Rice is one of those vegetables which is easily injured by poor cooking, and may be made really unpalatable by a little over-boiling. Rice should be carefully looked over, and thoroughly washed in two or three waters. The kernel will then have a pearly lustre. It should be put into boiling water in which a little salt has been thrown, and allowed to boil fifteen to seventeen minutes. The water should then be drained off—and the kettle set back from the violent heat of the fire—when it has steamed in this way about fifteen minutes, it will be perfectly soft, of snowy whiteness, and each kernel will retain its individuality, and not be lost in one solid mass of paste. A pint of rice may be boiled in three quarts of water. *Am. Agst.*

To Kindle a Fire.—To start a fire in the morning, take a piece or two of rosin, the size of an ounce ball, or chesnut; wrap it loosely in paper, and set the paper on fire. About one cent's worth a week kindles my fire.

Wind Mills.

Some weeks ago, we published a figure and description of a wind mill for farm purposes, and promised as soon as practicable, to furnish another and cheaper contrivance. This we are now enabled to do by inserting two engraved figures with a description, from Thomas' new work on Farm Implements :

The force of wind may be usefully applied by almost every farmer, as it is a universal agent, possessing in this respect great advantages over water-power, of which very few farms enjoy the privilege.

Wind may be applied to various purposes, such as sawing wood by the aid of a circular saw, turning grindstones, and particularly in pumping water. One of the best contrivances for pumping is represented by *Fig.* 1, where A is the circular wind-mill, with a number of sails set obliquely to the direction of the wind, and always kept facing it by means of the vane, B. The crank of the wind-mill, during its revolutions, works the pump-rod, I, and raises the water from the well beneath. In whatever direction the wind may blow, the pump will continue working. The pump-rod, to work steadily, must be immediately under the iron rod on which the vane turns. If the diameter of the wind-mill is four feet, it will set the pump in motion even with a light breeze, and with a brisk wind will perform the labor of a man. Such a machine will pump the water needed by a large herd of cattle, and it may be placed on the top of a barn, with a covering, to which may be given the architectural effect of a tower or cupola, as shown in *Fig.* 2.

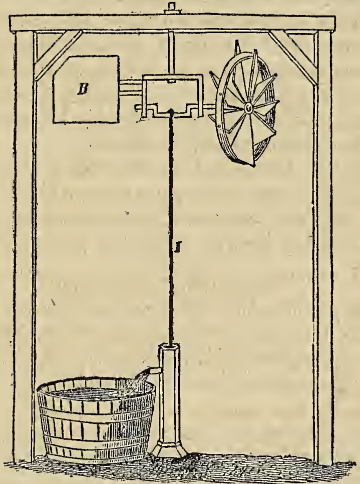

Fig. 1.

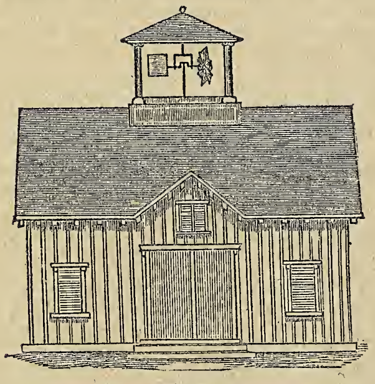

Fig. 2.

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Lime and Ashes for Muck.

Messrs. Editors—Is it proper to use ashes and lime together, to decompose *muck?* If so, what proportion of ashes to lime, should be used? How many bushels of the mixture, will decompose a cord of muck? Can muck, decomposed as above, be used with impunity in compost with stable manure, without the lime contained in the muck driving off the *ammonia?* If it can, how many cords of the prepared muck, to one of stable manure, can be used, with a view to make the utmost advantage?

Can muck, prepared only with lime, be used with stable manure, without endangering the ammonia? How many bushels of lime will decompose a cord of muck. How many bushels of ashes will do the same? Long Islander.

Is it proper to use ashes and lime together to decompose muck. The ashes should be in smaller quantity than the lime, but no definite proportions can be given to suit all cases. The refuse lime containing ashes, from kilns where wood is used in burning, may be used in this way to good advantage. As far as actual *decomposition* is concerned, perhaps lime is as good as such a mixture, but we add other ingredients in the ashes and hasten the process.

As to proportions of the mixture to be used, muck varies so much that definite proportions I cannot give. I have seen no farmer use any exact rule in such cases. When *lime* alone is used, the amount is varied, from one to five bushels per cord (128 solid feet) are used; two bushels are generally amply sufficient.

Such decomposed muck should *not* be used in compost heap with stable manure, unless it has lain exposed to the air a long time before mixing it with such manure, and even then some loss of ammonia is likely to occur. The same is true, whether lime or lime and ashes, are used to effect the decomposition.

Muck varies greatly in its composition, properties and effects. The use of lime, (or other alkali,) is to neutralize certain organic acids found in it almost always, and perhaps to effect some other important changes. The same thing can often be effectually done by exposing it to the action of the air, one season; but many good farmers prefer the use of lime, mixing the two thoroughly some time before they wish to use the mixture. Such is used with very good effects in the western part of the state upon various crops. When lime is not used in its decomposition, it may be used in compost with stable manure. B.

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Grubs in Apple Trees.

Some writers tell us that the ravages of these worms can be prevented by putting lime or ashes around the trunks of the trees. This may do a little good, if the grubs have not entered the trees: but after the grubs have penetrated the tree, and bored a hole upward four or five inches from the place of entry, to say that they can be driven from their hiding place by putting lime around the foot of the tree, is a perfect humbug. The only way to destroy them is to dig them out with a sharp pointed knife or other suitable instrument, and kill them. Elihu Cross. *Hoosick, N. Y.*

Curing Hay.

We find in the *Middlebury Register* of 12th inst, a valuable article on this subject from S W. Jewett, Esq., from which we make the following extracts:

In our opinion, there is a great mistake existing in this matter. It is an old adage, "Make hay while the sun shines," and many seem to think that the more sun they can get upon their hay the better. Here is the mistake to which we allude.

By this process of over drying in the sun, a great many tons of hay are lost. The influence of the sun is partly that of distillation, and has the power to expel not only the watery elements contained in plants, but the real substance of the plant itself, which goes to form fat and muscular fibre of all ruminating animals. It is asserted by distillers of plants, that to procure the most oil, they must not be dried in the sun, as it not only lessens the quantity of oil, but also diminishes the flavor. Now, grass may be exposed to the influence of the sun's rays, until there remains but the woody fibre, until there is no more nourishment in it than there is in a pile of wood.

Thus, from one tenth to four fifths of the nutritive part of hay is lost by the maker in the process of drying, or what might be more properly called a process of distillation. We have reason to believe that in Vermont alone there is lost during one season, in this way, more than five hundred thousand dollars worth of nutriment in hay; which, if it had been wisely retained, might have nourished many hungry flocks and herds, as nature designed it—instead of being resolved again into its constituent elements, and wafted away by the winds.

When the hay-maker is desirous of stacking or mowing his hay a little underdone, he may do so with impunity, by adding layers of dry straw or old hay, occasionally, to absorb the gases which would pass off by over heating or in the field, under the influence of sun and air. Much value, in this way, may be saved, as stock will eat the straw and old hay with avidity, though it may have been second quality.

Another good method of storing your hay, as green as possible, is by providing several places so that but one or two loads may be put together the same day. By this gradual process of storing the hay, it will be richer in quality, if not over ripe.

When the hay is not made enough to save well by storing in large bodies,—it may be cast on to an open scaffold or remain on the load, over night, to sweat. All hay, under done, should be pressed as lightly as possible in mow or stack, but when over cured or too ripe, the more solid it is pressed at unloading the better.

To make a stack of hay properly, it should be several days in going up, that you may be able to retain its good virtues and give the stack time to settle by degrees.

Grass should be wilted, then, without dew or wet, and put up into cocks, not by rolling, but by placing one forkfull top of the other. When the grass gums the scythe in cutting, it requires little or no drying before it goes to the barn, if stored with proper care. Hay may heat in the mow, to a certain extent, and not be rejected by stock, and is not apt to must or mold in small bodies, if the water is thoroughly dried off. When hay is liable to over heat, it should be turned up to air, or a square pit cut out of the centre to check it.

A chimney is sometimes formed by setting bundles of straw on end one top of the other, commencing near the bottom of the stack, or mow ending near the top When over dried, as before stated, it never becomes solid in the mow. That fed from the solid mow, is of more value, and will go much further, pound for pound, than that fed out of the loose hay in bulk.

Every stack or mow, divided by the hay knife, will keep more stock, fed in this fresh state, than from the larger surface, which is constantly exposed to the distillation of the air. For the same reason, when moved in the winter, it does not spend as well.

Protecting the Peach.

The following communications, which appeared in a late number of the New England Farmer, confirm the opinion which we have repeatedly expressed, that in nearly every county in the Northern States, crops of peaches may be successfully raised, by selecting a proper site, and giving proper treatment. Shortening-in the trees, so as to keep the heads in a small, compact, but not crowded head, would greatly facilitate winter protection, besides improving the crop. We have already mentioned the advantages of evergreen boughs, and these would doubtless prove very efficient, and would be easily applied in such districts as are largely supplied with pine, hemlock, or cedar forest trees.

Messrs. Editors—In answer to an inquiry in your last week's paper, whether trial had been made by any one in protecting the peach, I am happy to say I have tried it with complete success. I have peach trees in their fifth year, which have never suffered in the least from the coldest weather. This place is situated one degree north of Portland in the White Mountain region, about 700 feet above tide water. The prevalent idea that extreme cold alone will kill the peach, I believe must be abandoned; or rather, the idea that when the thermometer is 12° degrees below zero it is fatal; I have contended for several years, that it is not so much the extreme cold as the strong winds. pelting sleet and snow, and sudden changes of temperature that affect the peach. We had the thermometer once last winter at 34°, and at several times from 12° down to that extreme degree of cold, and yet our peach trees that were protected by matting or fir boughs were not injured at all.

My practice is this. Late in the fall I draw the limbs of the tree together and put round some matting, a single fold will answer, drive a stake down by the side of the tree and fasten the tree to it. One man can protect from one to two hundred trees in a day; care should be taken not to unwrap too early in spring, so as to expose the fruit buds to the late frosts.

I also protected a locust tree in the same way, simply by lashing a few fir boughs to the northwest side of the tree. It now looks as bright as though it were growing in the latitude of Philadelphia.

I can see no reason why peaches cannot be raised in any part of Maine simply by protecting them in this way. It may not be known to all of your readers that although we live so far to the North, the ground is rarely frozen to any extent, in winter. The early snows prevent this, so that it is only the tops of such trees that need special protection. It is useless to attempt the cultivation of the peach in this State without some kind of protection; they may survive one, two, or even three winters should they be mild, but the fourth may kill them all down.

I can see no reason why the tender varieties of dwarf pears and plums may not be protected in the same way, and thus largely increase our luxuries. A little pains must be taken even with the apple tree to make it flourish. I have known persons object to cultivate the Isabella grape, simply because they were told that the vine must be protected through the winter; such a person ought not to possess many comforts.
M. T. True. *Bethel, Me., May* 27, 1854

To Black a Brick Hearth.—Mix some black lead with soft soap and a little water, and boil it—then lay it on with a brush. Or mix the lead with water only.

Answers to Inquiries.

COUCH GRASS.—"Be so kind as to tell me, if possible, the best way to destroy utterly, this labor-consuming, patience-worrying weed." *A Subscriber.* The leading principle to be observed in destroying all weeds which increase by the roots, is that *plants die by smothering.* Keep them under the soil, not allowing them to breathe through their lungs the leaves, and they will soon perish. If then, there is no further increase by seeds, the work is accomplished. If there are no stumps, trees, large stones, or other obstructions, the whole upper surface of the soil, including all its matted roots, may be turned deeply under by means of the largest double Michigan plow, drawn by three yoke of oxen or their equivalent in horses. The first mould-board should run deep enough to throw the surface into the bottom of the previous furrow, so that the second mould-board may bury it deeply there.

STEEL SOD AND SUBSOIL PLOW.—*C. C. T., Huntley Grove, Ill.* The Michigan sod and subsoil plow, with steel shares, is manufactured, we are informed, by E. THRASHER & Co., Dayton, O. We do not know the price.

CLOVER HEADERS AND HULLERS.—I wish to know where I can obtain a clover header—one that takes nothing but the heads, and the price thereof; and also a clover huller and separator, that can be run by a strap horse power, and the price of it. W. WESTBROOK. *Pike county, Pa.*

Wagener's Clover Header, said to be the best machine of the kind, can be procured at the Agricultural Warehouse of RICH'D H. PEASE in this city—price $100. MESSRS. WHEELER, MELICK & Co. of this city, manufacture their well-known clover huller—price $32; and we are told there is a Clover huller and separator combined, made by A. Letterette, Waterloo, N. Y.—price $90.

CURRANT AND ELDERBERRY WINE.—Will you, or some of your readers, give me reliable recipes for making and keeping currant and elderberry wine? It is possible that recipes have been published in former volumes, but as to many of your readers those are inaccessible, it may be well to insert them again. H. L. S.

Our correspondent will find a good recipe for making currant wine in the 1st vol. of the Co. Gent. p. 325, or in the Cult. for 1853, p. 223. Perpaps some of our readers can furnish a recipe for elderberry wine.

COTSWOLD SHEEP.—I saw an inquiry in the *Country Gentleman,* for Cotswold bucks. I have a flock of about one hundred of that kind of sheep, and have some buck lambs born in May. I have also one two-year-old buck and two yearlings that I could spare. ALFRED HALE. *Lyons, N. Y.*

In the last Cultivator, I perceive a notice of a subscriber, wishing to know where he can procure a pure-bred Cotswold buck. I can tell him. I have one, 3 years old this spring. He is not a decendant, direct or indirect, from Col. Ware or Mr. Reybold's flock. I must make a new cross the coming fall, and this is my only reason for parting with him. His equal I do not expect to find. As a stock-getter, he can show some as good decendants as any *sheep in the state.* Suffice it to say I will give, for his equal, $100.

I have a number buck lambs of his get; and will sell some ewes this fall, if any of your friends wish to purchase of the pure Cotswold breed. I have not mixed with Lincoln, Leicester, or any other, but a few ewes of Oxfordshire, and I have bred them for 18 years. Address JUSTUS C. HAVILAND, *Chesnut Ridge, Dutchess Co., N. Y.*

SEEDING TO CLOVER AND TIMOTHY.—(J. F. F. H., Green Bay, Wis.) In order to seed land to clover and timothy, that is now covered with coarse grass and willow bushes,—the first thing is to drain the land if it needs draining—then remove the bushes, and if possible plow the surface, or render it mellow by some process of tillage. Timothy and clover sown very early in spring upon this surface and brushed in, will probably form a fine growth in a few months. The growth of timothy is well adapted to drained peat lands, and clover often succeeds well, but is not so certain of success.

PLAN FOR A GRANARY.—A correspondent at Armington, Ill, wishes a plan of a granary that shall hold 800 to 1000 bushels of wheat, 500 of oats, with a small corn crib for 200 to 400 bushels of ears. Also, with a shed attached for wagons, implements, &c. The cost may be $200 to 400. Will some of our readers, who know of a model erection of this sort, please furnish a plan and description? If placed on rat-proof pillars, the wagon-shed should be built separate. Where rats find access to the building, they may be generally kept out of the bins by lining the corners with strips of tin or zinc a few inches wide, but the best way is to exclude them entirely.

MICHIGAN DOUBLE PLOW.—This plow may be used in all soils, whether heavy or light, that are benefited by *deepening.* There are very few that are not—we have never met with any exceptions—but some may be much more improved than others. A depth of a foot or more with three yoke of oxen with largest plow, is easily attained. Two yoke will run it ten or eleven inches down.

CORN CUTTER, FOR HORSE POWER.—I wish you would give me some information of a corn cutter by horse power, which as been exhibited at the Crystal Palace, through the columns of your paper. Yours, &c. E. DENNISON.

Will some of our correspondents, who may possess the desired information, please answer the above.

HAND-MILLS.—(*J. Munger.*) For grinding *flour* for bread, we do not think any mode can be devised so cheap or perfect, as the best mills now in operation through the country. But where mills are remote, coarse feed for domestic animals, requiring but little skill, and saving much teaming, may undoubtedly be prepared by horse power at home, during rainy days in summer, or stormy days in winter. Will some of our correspondents, who may have used such mills give us the result of their experience, and what mills they have found to succeed best.

Pasturing Woodlands.—(*A Subscriber.*) We do not consider it expedient in any case to pasture woodlands; for if thick, no grass of any value will grow, and if not so, the underbrush should be allowed to come up and supply the deficiency. Land should be either quite cleared, so as to be subjected to tillage, or else allowed to grow densely to trees.

Game Fowls.—In answer to an inquiry in the Country Gentleman, where game fowls might be obtained, I will say that I have been breeding game fowls for the last nine years, to the exclusion of all others. I have the most approved breeds now in use, and entirely pure. Price $5 per pair. For further particulars address R.W. K., *Jefferson Valley, N. Y.*

Cow's Teats.—Can you or any of your subscribers, inform me of a way to cure a stoppage of the milk in cows? I have a Durham cow, valuable for stock which gives milk from one teat only; the others have given milk, but now seem to be stopped up by a loose lump in the teat at its base or upper part; the lump is hard and loose from the skin; seems like a knot, about as large as a chestnut. There was no apparent inflammation previous to the appearance of the lump. Any information thankfully received. N. N. *Havana, Schuyler Co., N. Y.*

S. C., Cline's Mills, Va.—We have handed your or- to R. H. Pease, Albany Ag. Warehouse, who will write you on the subject.

H. R. Jr., Ghent, Ky.—There is a hay press manufactured in this city, by Deering & Dederick, which we believe works well. Emery is not making his press at present.

S. M. D.—This correspondent inquires the prices of butter, cheese and milk, in New-Orleans, St. Louis, Memphis, Louisville, Cincinnati, &c.; but we have no means of answering his question.

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List of State Fairs for 1854.

Ohio,	Newark,	Sept.	19—22
Michigan,	Detroit.	Sept.	26—29
Illinois,	Springfield,	Sept.	12—15
Indiana,	Madison,	Oct.	4— 6
Iowa,	Fairfield,	Oct.	25
Wisconsin,	Watertown,	Oct.	4— 7
Pennsylvania,		Sept.	27—29
New-York,	New-York City,	Oct.	3— 6
Vermont,	Brattleboro',	Sept.	12—14
New-Hampshire,		Oct.	3— 6
Georgia, So. (Central,)	Augusta,	Oct.	23—28
Connecticut,	New-Haven,	Oct.	10—13
Maryland,	Baltimore,	Oct.	3— 6
Missouri.	Boonville,	Oct.	2— 6
Lower Canada,	Quebec,	Sept.	12—15
Upper Canada,	London,	Sept.	26—29

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A writer in the Vergennes Independent estimates the cost of the highway fences in Vermont at $4,640,000, and the annual expense of supporting them at $855,200. Therefore he argues that these fences should be dispensed with.

Agricultural Societies.

Rockingham Fair.—We are indebted to H. F. French, Exeter, N. H., for the "Transactions of the Rockingham Fair for 1853." This association was organized in Oct. 1852—Henry F. French, Prest. and J. T. Gilman, Sec'y—and held its Fair in Sept. 1853, which proved, as we should have anticipated it would under the magnetic influence of its worthy president, eminently successful, and the association closed its first year's doings with a balance of over $1,500 in its treasury. A large portion of its funds was derived from 380 persons who became life members by the payment of $5 each. The Transactions open with an introduction, setting forth very clearly the objects and benefits to be derived from agricultural and mechanical associations. This is followed by an account of its Fair, Reports of Committees, &c., and the Address, which was delivered by Simon Brown, Esq., editor of the New-England Farmer, and which is marked by the sterling good sense which has characterised that journal since it has been under his charge.

Great Fair at Pittsburgh.—The Allegheny Co. (Pa.) Ag. Society are to hold an exhibition, for Western Pennsylvania and Ohio, at Pittsburgh, commencing on the 3d of Oct. next. From the liberal premiums, for a list of which we are indebted to P. A. Way, Esq, vice-president of the Society, and the ample preparations making, a magnificent show may safely be anticipated. One of the most attractive features to the multitude, will undoubtedly be the trial of skill on the part of the "Lady Equestrians," for the rich prizes made up by the citizens of Pittsburgh, consisting of a $200 horse—one of $30—three of $20—one of $15—six of $10, and five of $5.

Rensselaer Co. Ag. Society.—This society having succeeded in paying the debt incurred by the purchase of its fine show grounds at Lansingburgh, are determined to get up an exhibition this year which shall surpass any former one of the society. With this view, and to encourage a livelier competition, the amount offered in premiums has been increased six hundred dollars, making the whole amount over two thousand. The fair is to be held on the 19th, 20th and 21st days of September, and will, we doubt not, be one of the best ever held in the State.

Onondaga Ag. Society.—The next fair of this society is to be held at Syracuse on the 20th, 21st and 22d of Sept. This society embraces within its precincts, some of the best farms as well as best farmers in the State, and its exhibitions are alway a credit to them. J. C. Woodruff, Syracuse, Prest; H. D. Didama, Salina, and D. Cossitt, Onondaga, Secretaries.

☞ The Orleans Co. Ag. Society, holds its next fair at Albion, Sept. 27 and 28.

The Farmers' Independent Ag. Society will hold a fair at Morris, Otsego Co., the 20th and 21st of Sept., at which time the usual premiums offered by such associations will be awarded. F. M. Rotch, Esq., Butternuts, is President, and A. C. Moore, Sec.

Notes for the Month.

Analyses of Soils.—We cannot too highly commend to the attention of our readers, the communication of our correspondent, Mr. S. W. Johnson, published in this no. of our paper. It discusses the question of the immediate practical value of soil-analyses, with candor and ability. It is from the pen of a man of science, who has devoted himself for years almost exclusively to the study of agricultural chemistry, and who thoroughly understands the subject upon which he treats. His conclusions are clear and emphatic, and cannot fail to commend themselves to the good sense of the intelligent and reflecting reader.

Great efforts have been made in this country, by ignorant and designing men, to lead the public mind astray upon this subject. The idea that chemistry had opened the arcana of nature, and revealed to us all the processes of vegetation, and that all that was now necessary was to furnish a chemist with a few pounds of earth, to enable him to prescribe with unerring certainty the medicaments necessary to ensure the production of a certain amount of any desired crop, was, indeed, a beautiful one; but in practice, the test to which all theories must be subjected, it proved an utter failure; and few, if even one really intelligent chemist, can now be found, who believes in this proposition. It is, in fact, only advocated by pretenders, who believe that an "honest penny" can be made in the shape of fees for $5 analyses, and the prescriptions deemed necessary to render them effectual.

A New Mowing Machine.—Mr. Fisk Russell of Boston, a practical mechanic of large experience, has invented a mowing machine which differs in several particulars, both in principle and construction, from those now in successful operation, and decided advantages are claimed for it. The driving wheel is the same as in Ketchum's; but the vibratory motion is obtained from a wheel consisting of a series of cams, by the undulating rim of which a lever is made to move the knives. The knives are each separate, and play upon a steel pivot, acting as they vibrate, like a pair of shears. The frame of the machine is supported by a second wheel of the same size and opposite to the driving wheel, which renders the movement of the machine more steady, and obviates in a great measure, the side draught.

The machine was tried last week on the farm of B B. Kirtland of Greenbush, and did its work admirably. There was no clogging, and apparently less power was required to operate it than other machines. It is simple in its construction, and works with very little friction. Mr. Russell intends to devote the remainder of the hay season to experimenting with and perfecting his machine, and it will not be offered for sale till another year. Any judgment as to the superiority of the machine would be premature until further trial has been made, but it certainly promises to be a valuable labor-saving implement.

Farm Machinery.—The Journal of the N. Y. State Ag. Society states that Roswell L. Colt, of Patterson, employs on his farm a steam-engine of 13 horse power, which performs the operations of threshing, cutting stalks, straw, and hay—steaming food, sawing fire-wood, boards, timber, &c. The steaming apparatus for preparing food is very complete. The outbuildings are of the most complete kind—the arrangements for horses, cows, pigs, poultry, &c., are excellent—the stables are so constructed as to save all the manure both liquid and solid.

Imported Stock for Ohio.—We learn that N. B. Hogg, Esq. Newark, O., has recently added to his stock, a South Down ram, and some Essex and Suffolk swine, from the imported stock of Col. L. G. Morris, Fordham, and a pair of short-horned cattle from the herd ot Col. Sherwood of Auburn.

☞ Mr. P. Melendy of Mount Healthy, O., recently passed through this city, with twenty-nine head of Suffolk swine, some of them imported, and a pair of Devons, all purchased of B. V. French, Esq. of Braintree, Mass. Mr. M. is a thorough farmer, and is doing much by his liberal introduction of improved stock, to promote the agricultural interests of southern Ohio.

More Cattle for Ohio.—Seven short-horned bulls from seven to 22 months old, and ten cows and heifers from one to four years old, and seven Leicester sheep, were shipped aboard the John Bull, from Liverpool for New-York, on the 29th of May, for the United Society of Shakers of Warren county, O. They are spoken of in the English papers as a very fine lot, and cost from $200 to $1,000 per head.

Tile-Draining.—S. Williams states in the Farmer's Mirror, that his son has a market garden on the continuous flat lands east of Buffalo; and that his pipe and tile-drains have put him a month ahead of his neighbors this spring, paying more than the outlay in one season.

Show of Horses at Providence.—The Exhibition of Horses which took place at Providence, R. I. June 21 and 22, was very successful, both reflecting credit upon those engaged in its management, and drawing together a fine display of animals. Indeed in every thing but stallions, the show was pronounced equal if not superior to that at Springfield last year, while the number of entries (345) was nearly as great. The exercises were those usual on such occasions—opening with a display of all the horses on the ground, occupying and moving slowly around the entire track, and followed by an exhibition of the draught horses, mares, fillies, matched, trotting and hackney horses &c. by themselves. A trial of speed, in which horses not under three minutes, are said to have been "nowhere" closed the scene, and the throng of visitors retired well satisfied with the arrangements of the managers and the appearance and accomplishments of the brute portion of the exhibition. The weather was very favorable, the course crowded by citizens and strangers, and the best order every where prevalent.

Sale of Famous Horses.—Four celebrated racers were sold at auction in New-York last week, viz: *Mac* was struck off at $4,100, to Mr. Mann, of Baltimore; *Tacony* was sold for $3,700, to Mr. J. G. Bevens, of New-York; *Frank Forrester* was sold to Mr. Mann also, who paid $2,350. *Barnum* was withdrawn from the auction, he having been sold at private sale during the morning, for the sum of $2,850.

☞ In the Country Gentleman of June 15th, we published a paragraph, the proof of which escaped reading, and which was so marred by typographical errors, that it failed to contain the facts intended. It should have read as follows:

We understand that Mr. C. D. Bent, near Hannibalville, Oswego Co., has purchased of Col. J. M. Sherwood, Auburn, a boar pig, got by his old imported Suffolk boar, and from a sow which he exhibited at the Ag. Society's Show in Feb. last. Mr. Bent has also lately bought a sow pig from John S. Clarke, Esq., Throopsville, from the sow whose portrait we gave in a late no.

A Remarkable Hen.—Last fall I purchased a pair of Shanghai fowls which were hatched late in the spring of 1853. They were allowed to run with the other hens, and were fed but once a day with corn. Pullet commenced laying the 2d day of April, and finished laying the first litter May 17, having layed 46 eggs in as many days. She commenced her second litter May 28—has layed 21 eggs, and continues to lay daily. It will be seen that she has layed 67 eggs between the 2d of April and 17th of June, 78 days. W. H. S. S. *Utica, N. Y.*

The Onion Worm.—Onions are now being destroyed in almost every part of the country, by a small white grub, which eats the root. Applications of sulphur, lime, ashes, &c. have no effect upon this pest of the garden. I have saved a large portion of my onions, by pulling up the plants as soon as they begin to wilt, and destroying the grub which is found imbedded in the root or lower portion of the stalk. S. *Castleton, Vt.*

A Question for Agricultural Chemists.—I have been lately informed by an intelligent gentleman that he has tried for several years, with very great success, soapstone dust on different growing crops, applied in the manner of applying plaster or ashes. He considers the material as valuable as ashes for agricultural purposes. He procures his dust from a mill, worked by himself for sawing soapstone for market. L. Edgerton. *Georgia Vt.*

A Mammoth Fleece.—Mr. Hiram Cole, of Shaftsbury, in this county, requests us to say to those engaged in the rearing of sheep, that he sheared from a buck on the 12th day of June last, 28 and 1-16th pounds of wool—This sheep is one year old last March. He also has two ewes, from one of which he sheared 10 pounds and 12 ounces, and from the other 11 and one half pounds. We would futher say that one of these ewes raised five lambs from March, 1853, to May, 1854; and the other has raised three within the same period of time. Mr. C. purchased these sheep of S. W. Jewett, Esq. of this State. They are purely French.—*Vt. State Banner.*

The National Cattle Show.

At the National Cattle Show to be held at Springfield, Ohio, on the 25th, 26th and 27th of Sept. next, the following very liberal premiums are to be paid:

SWEEPSTAKE PREMIUMS.

Best Bull, and 5 Cows or heifers of one year or upwards, from any one State,	$500

DURHAM BULLS.

Best 3 year old and upwards,	$300
Second best 3 year old and upwards,	200
Third best 3 year old and upwards,	100
Best 2 year old and under 3 years.	200
Second best 2 year old and under 3 years,	150
Third best 2 years old and under 3 years,	75
Best 1 year old and under 2 years,	150
Second best one year old and under 2 years,	100
Third best 1 year old and under 2 years,	50
Best Durham bull calf,	50

DURHAM COWS.

Best 3 year old and upwards,	200
2d do 3 do do	150
3d do 3 do do	100
Best 2 do and under 3 years,	150
2d do 2 do do 3 do	100
3d do 3 co do 3 do	50
Best 1 do do 3 do	100
2d do 1 do do 2 do	75
3d do 1 do do 2 do	50
Best Heifer Calf,	50

AYRSHIRE BULLS.

Best 3 year old and upwards,	100
2d do 3 do do	75
Best 2 do and under 3,	80
2d do 2 do do 3,	60
Best 1 do do 2,	75
2d do 1 do do 2,	50

AYRSHIRE COWS.

Best 3 year old and upwards,	100
2d do 3 do do	75
Best 2 do and under 3,	75
2d do 2 do do 3	50
Best 1 do do 2,	60
2d do 1 do do 2,	50

For Devons and Herefords, the same prizes are offered as for Ayrshires.

The recent extensive importations into Ohio and Kentucky, of the best Short-Horns to be procured abroad, most of which will probably be present at this exhibition, will undoubtedly render it, in regard to this breed at least, the most interesting one ever held in this country.

South Down Sheep.

Mr. T. B. Buffum of Newport, R. I., in a late no. of the *New England Farmer*, thus speaks of this breed of sheep:—"I keep South Down Sheep, and like them much; they are quiet, thrifty and handsome. I sold to one of my neighbors 26 last fall, and a short time since I called to see them, and they had 48 as fine lambs as need be; one sheep had three, and all doing well. I sold the wether lambs from them last year at $4 per head, to the butcher—my neighbor will probably get more than that for them this year (and there is no doubt at all but he can if he chooses.) We will say that he gets $200 for lambs, and allow say $40—a low figure—for wool, gives $240, a handsome return from only 26 sheep. The sheep were nearly all half blood, except three, perhaps, that were nearly full bred.—I have now a flock of full blood consisting of 30, that have now living and about two months old, 48 lambs, (if I count right) the same number as my neighbor gets from his 26 mixed breed. The mixed breed seem as hardy, and about as productive, as the full bloods; perhaps they are more profitable for practical purposes, as they generally shear considerably heavier fleeces. I get more for my lambs when I sell them, on account of the breed. I sold all the bucks I had last year, at prices varying from 7 or 8 to 25 dollars, as for quality and size, and bought one of L. G. Morris, for $50. I have this year a few nice lambs sired by an imported buck now owned by J. Thorne, of Duchess Co., that sold in England for $650: they are good lambs, but a stranger could not, I think, select them from among the others.

Spanish Merinoes.

MESSRS. EDITORS—Can your eastern states beat the west in wool-growing? Without intruding, permit me to report the result of my annual sheep shearing. From forty ewes and bucks, I clipped from 4¾ lbs. to 24 lbs. of wool per fleece. I annex the weight of fleeces from 16 Spanish Merino ewes, the wool washed on the sheeps' backs, except nos. 15 and 16, which were unwashed:

No. 1, 10 lbs.—2, 8 lbs.—3, 7½ lbs.—4, 6 lbs.—5, 7 lbs.—6, 6 lbs.—7, 8 and 9, 7 lbs. each—10, 6½ lbs.—11, 6¼ lbs.—12, 6 lbs.—13, 8 lbs.—14, 11 lbs.—15, 23 lbs.—16, 24 lbs. J. S. GOE. *Tippecanoe, Fayette Co., Pa., July* 6, 1854.

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THE PIE-PLANT.—A correspondent of the *Indiana Farmer* expresses the opinion, based upon experiment, that the use of ashes as manure for the pie-plant, produces a more delicious plant than any other mode of culture; not being as sour, but containing just enough acidity to make them pleasant. The reason given for this is, that the acid peculiar to the rhubarb is neutralized in part by the alkali of the ashes.

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June 27—w4tm1t

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July 1—w4tm1t Newark, O., June 26, 1854.

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Feb. 1—m1y Braintree, Mass.

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Contents of this Number.

THE FARM.

Practical Value of the Analyses of Soils, by S. W. Johnson, ... 233
Construction of Cisterns, ... 236
Farm Implements, by J. J. Thomas, ... 237
Economical Manure, ... 239
Good Condition of Plants and Animals, ... 239
How to get Water for Cattle, ... 239
New Method of Fertilizing Land, by E. Cross, ... 240
Importance of Irrigation, by Lema, ... 241
How to Increase the Manure Heap, by L. Smith, ... 241
Future Prices of Farm Products, ... 241
Meat-Market Supplies, ... 242
Crops at the West, by An Old Farmer, ... 242
Vegetable Physiology—Weeds, by W. H. Brewer, ... 243
Buckwheat, Time to Cut, ... 245
Plan for a Barn, by O. C. G., ... 245
Culture of Buckwheat, by G W. P., ... 246
Crowbar—No. 2, by A. Yeomans, ... 246
Ventilating Haystacks, ... 246
What shall we Substitute for Guano? ... 247
Curing Clover Hay, ... 247
Design for Farm Buildings, ... 248
Fruit Drying Apparatus, ... 253
The Wheat Weevil, by J. Johnston, ... 254
Chemical Elements of Food, ... 255
Wind Mills, ... 256
Preservation of Manure in Summer, ... 255
Lime and Ashes for Muck, ... 256
List of State Fairs, ... 259
Agricultural Societies, ... 259
Answers to Inquiries, ... 258
Notes for the Month, ... 260
On Curing Hay, by S. W. Jewett, ... 257
National Cattle Show in Ohio, ... 261

THE GRAZIER.

Hoven in Cattle, ... 238
Galls on Horses—Whey for Pigs, ... 246
Breeding from Broken-down and Diseased Mares, ... 246
Remedy for Poisoned Sheep, ... 252
Andalusian Fowls, by E. H. Bliven, ... 238
Is the First Milk Poisonous? ... 254
South Down Sheep, by T. B. Buffum, ... 261
Spanish Merinoes, by J. S. Goe, ... 262

THE HORTICULTURIST.

The Early Summer Pears, ... 249
Insects on the Elm, by B., ... 242
Cherry Slug, to Destroy, ... 236
Inquiries and Answers, ... 250
The Apple Worm, ... 250
The Horticultural Review, ... 251
Fruit Culture, by W. M. C., ... 251
French Names to Fruits, ... 252
Live Braces for Fruit Trees, and Budding Roses, by E. Cross, ... 252
Black Warts on Plum Trees, ... 254
Grubs in Apple Trees, ... 256
Protecting the Peach, ... 257

THE HOUSEWIFE.

Currant Wine—Mint Sauce, ... 255
How to Boil Rice, ... 255
To Destroy Bedbugs, ... 255

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VOL. II. ALBANY, SEPT., 1854. No. IX.

Wheat and Chess.

The destruction of the present crop of wheat by winter-killing, has been greater than has occurred for many years; and we have no doubt, as a consequence, we shall hear of numerous cases of the transmutation of wheat to chess, so generally believed to result from winter-killing. Communications on this subject have already begun to come in, some by way of inquiry, and some to explain the nature of the change which takes place when one plant becomes the other. We select the two first received of each of these, for the purpose of giving as requested, our views on the subject.

The first is from a correspondent at Waterville, N. Y. He describes a very promising field of wheat, as it appeared on the approach of the last winter, believed to be from very clean seed, but which was almost totally destroyed. The field remained untouched, and is now covered with a growth of straw sufficient for the growth of a crop of wheat of sixteen to twenty bushels to the acre, and seven-eighths of this is *chess*." Our correspondent requests an explanation.

Now, it would require a person possessing more of the ability of seeing a long way through the dark, than any clairvoyant, to know so far off as we are, all that had taken place in this field, and where the seed of the chess came from. But as we have seen many such cases with quite *similar results*, where the chess plants very evidently sprang from chess seeds, we can offer an explanation of the manner in which this *might* have occurred.

Chess is a most singular plant. 1. The seed is inconspicuous, and we have found plenty of it in wheat, pronounced by men who prided themselves on their keen eyes, as perfectly clean. 2. The seed is very hardy, and will escape destruction, and grow, when all other grains are destroyed. 3. It accommodates itself wonderfully to circumstances; it will grow unobtrusively and unseen in a timothy meadow, and ripen and drop its seed from plants not over two or three inches high, as we have had occasion to observe; and in this way secretly perpetuate its kind and fill the soil with its grains. These same minute and unseen plants, if they had had plenty of room and mellow soil, would have sprung up, formed a large stool, thrown up numerous stalks, and borne each three to five thousand grains,—enough to seed a whole acre. 4. Hence, when wheat winter-kills, the plants which otherwise would have been kept down and never seen, spring up and spread prodigiously, and cover the whole ground with their rampant growth. 5. A portion of a field has been killed, and, as was supposed, turned all to chess; another portion escaped, and no chess was observed; yet by measuring off a square rod of each, and examining with great care and minuteness, it was found there were as many chess plants of diminutive size among the good wheat, as there were of luxuriant vigor on the destroyed portion; the large plants, which had plenty of room to grow, yielding nearly *a thousand times* as much seed as the other. This *might* have been the case with the crop our correspondent mentions; but there are several ways in which chess seed is spread artificially, which farmers but little suspect; and a few grains of these will multiply in one season to a heavy seeding of the ground. Foul ground, in the same way, may produce a similar result; or two or three of these causes may operate together.

It is often surprising and unaccountable how weeds will spring up and cover the ground, without our knowing how the land had been seeded with them. We have known a meadow that had lain some twenty years or more, to yield a dense growth of foxtail grass as soon as the sod was inverted; and in another case an old pasture on being plowed, was covered with a heavy crop of pig-weeds. It would have been very absurd, because we could not tell where the seed came from, to have asserted that the timothy had been changed in one case to foxtail, and in the other to pig-weed.

The different causes we have already mentioned, have been found amply sufficient, when taken together or separately, to explain all the supposed instances of transmutation that have come under our notice. But, supposing there are cases very difficult to explain; this difficulty cannot be got over by admitting a still greater difficulty,—nay, an utter impossibility. Seeds, when planted, often produce new *varieties*, but never *new species*. Seedlings never can and never have crossed the specific boundary. But wheat and chess are not only separate species, but they belong to entirely different GENERA; and it would be as impossible for the seed of one to produce the other, as for a cow to bear a young colt, or a merino ewe a litter of Berkshire pigs.

The other correspondent whose communication we have already alluded to, residing at Portland, Chautauque county, merely *assumes* that a change may be produced in wheat by the pollen from the chess falling upon it. But as there is no *proof* whatever, of such a result, and as science deals in *certainties*, not in conjectures, we cannot attach great importance to this supposition, especially as no such cross was ever produced from different genera, by all the careful and skilful experiments ever performed. Who ever heard of a cross between a cherry and an apple tree? Or between a pumpkin and a pine apple? Who ever heard of half-bred animals resulting from the dog and the raccoon? or from the domestic duck and the turkey-buzzard? When these have taken place, we shall be more ready to look for a half-transmuted wheat head.

We have other proof of an incontrovertible character. If wet weather and freezing will change wheat to chess in *one place*, it will do so in another, under like influences. But there are countries possessing a climate like ours, where chess is never found—where no winter-killing ever produces a vestige of this weed; and some of our own farmers, to our certain knowledge, have with great and long continued care and labor, ceased to raise any chess whatever, no matter what the winters may be. In the one case, wheat is raised in regions of country where the weed has never been introduced,—where there is no seed,—consequently it *cannot* grow. In the other, the seeds have been extirpated from the farms,—hence no chess is ever seen.

With a single question we conclude these remarks. Why is it, that among the countless millions of plants that are said to change from wheat to chess *not one* is ever caught in the act; or why is it that there should not be found one solitary plant *partly changed*, or with distinct wheat and chess on the same root or stem? Large prizes of money have been repeatedly offered for such curiosities, but they have never made their appearance, although we often hear of them a long way off. The fact is, they never existed.

Smoky Chimneys.

I wish you could throw some light through your paper upon the subject of building chimneys that will draw well. I have looked in vain for a good article upon that subject, and need advice. S. J. Sherwood. *Beloit*, *Wis.*, *July*, 1854.

The draught of chimneys is occasioned by the upward tendency of the column of rarefied and lightened air which fills it as soon as the fire heats this column. It operates precisely like a column of water running down a tube, only in a reversed direction. To make a fire-place draw well, the *throat* just above the fire should be contracted to about four inches wide. Through this throat the hot air will rush violently to fill the vacancy above, occasioned by the rising column. Many chimneys draw badly in consequence of being made too large for the fire to heat the column sufficiently. As a general rule, the chimney should always be smallest just above the fire, and be again slightly contracted at the opening at the top. The contraction at the top prevents the wind from blowing down, the current being a little more rapid at its place of escape, and less easily effected by reverse currents of wind. Our correspondent will find this subject more fully treated of, with several engravings by way of exlanation, in Thomas's "Farm Implements," &c. p. 227.

The Weevil in Wheat.

Mr. L. Tucker—The weevil has this year for the first time, made its appearance in our county, and is doing much injury to the wheat crop. As it is something entirely new to me and my neighbor farmers, I should like to get all the information I possibly can in reference to it. Is there a preventive or remedy? Would early or late sowing make any difference? Does it get into all kinds of wheat? We in our county principally sow the white blue stem, which has been grown some ten or twelve years very successfully. There is some Mediterranean grown, but very little. Could you or some of your numerous subscribers give the requested information, it would very much oblige a subscriber. J. G. Meyer. *Aaronsburg*, *Centre Co.*, *Pa.*, *July* 7, 1854.

A correspondent in the western part of Ohio, states that it has destroyed nearly all the wheat in that region and has extended into Indiana; and from large portions west we hear accounts of its ravages. Intelligent cultivators have sought eagerly for many years to find a remedy, without much success. Early sown and early ripening crops are more apt to escape. Even portions of the same field are very differently affected, the earlier and best ripened parts often affording a fair return, while the later and poorer portions are completely destroyed. *High culture* therefore, promises as well as any remedy. The Mediterranean wheat is more apt to escape—partly perhaps from its early maturity. Some parts of New-York, where this insect has formerly been exceedingly destructive, have for a year or two past, not suffered nearly so much,—which leads to the hope that like many other insects, it may have its day and pass away—or at least intermit its ravages.

Insect in Wheat.

Messrs. Editors—Enclosed you will find a spire of wheat, with an insect in it. It is destroying my wheat considerably, by eating off the stem just above the upper joint, when in blossom. Timothy has been injured in the same way for several years past, and it has been attributed to the wire worms. The ravages of this insect are shown by the heads turning white while in blossom.

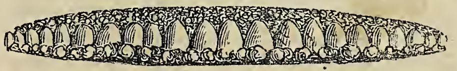
Do you know its character or name, or how it gets into the stalk? There is no opening or mark that I can perceive. It may be a common insect in wheat-growing sections, but I did not know that it attacked timothy in the same way. W. *Oswego*, *July* 8, 1854.

On reaching us, we discovered only two specimens of the insect. At first they appeared dead and dried legless larvæ, but a closer inspection showed they were the insects passed to the pupa state. They are about three sixteenths of an inch in length, and one-thirtieth of an inch in diameter—light green, with a slightly brown head—and consisting of nine rings or joints. They occupied the center of the stalk, which they had partly devoured and killed, the head of the wheat being nothing but empty chaff, and nearly white in consequence of the death thus occasioned. The stalk was *straight*, and the sheaths entirely uninjured. We have not met with this insect before, and do not know it.

Telford Roads.

The time is approaching when farmers will be no longer satisfied with the present combination of earth, ruts and mudholes in forming what is commonly known as public highways. The rapid increase in railroads and other means of transmission, has imparted quite new ideas of locomotion; and many are becoming very much averse to plowing through mortar beds with loaded teams. Plank roads, at one time, promised much, but from several causes they are likely to result in disappointment to their proprietors at least, except on the larger thoroughfares, where the amount of travelling will warrant the use of the best white-oak plank for their construction. A most reliable and durable substitute may be found however, in the Telford road, which may be cheaply constructed wherever scattered stones and gravel beds are accessible; and a brief notice of them may be useful by way of contributing to the stock of information on the subject of road-making, now becoming so desirable.

The foundation of the Telford road is a layer of rounded stones, which, being always more or less irregular, the smaller or sharper end is placed upward. The smaller stones are laid near the side of the trackway, and the larger towards the middle, thus giving the road an even convex form. In the best roads the spaces are then filled with small broken stone, which by the travelling upon it, is firmly wedged into the spaces between the larger stones already laid, and the whole becomes a solid, hard, immovable mass. In the absence of small broken stone, gravel will wedge firmly into the interstices, but will not become quite so solid as the other material. The whole surface is covered with a few inches of gravel or broken stone, and forms a smooth, hard, excellent road. Where the soil on which the stones are laid is likely to become soft in wet weather, a previous layer of stones should be deposited before the pavement is laid.



There are many parts of the country where the fields of the farmer are encumbered with a superabundance of stones, and which may be had without any cost; and when, in addition to this, gravel is accessible, these roads may be made at a very moderate expense, and if well constructed they will last a long period. Even when very carelessly made, the stones being thrown in without any arrangement, and with none of the advantages of wedging-together already described, they have been found to answer a most valuable purpose, although vastly inferior to well constructed roads.

Thermometer for Farmers.

Many a farmer has had the corner of his ear or the point of his nose touched most inconveniently with the frost on going out on a wintry morning without knowing the intense cold that actually existed at the time; and not a few have suffered most severely in bodily health, if they have not actually suffered from a "sun-stroke," by overdoing in the hay or harvest field before they were aware of the excessive heat. Few, who have not actually made trial, can be aware of the continual convenience of knowing by a glance of the eye the precise temperature of each day—the security it affords in providing for the comfort of domestic animals, who otherwise might severely suffer—the protection of cellars against frost in case of emergency—the shielding of garden vegetables on the approach of severe night frosts—and the preservation of rooms in winter at a uniform temperature, especially during sickness. For the latter purpose, (as well as for the others,) the sensation of persons in health is altogether too variable and uncertain for a guide, dependent as it is, on the state of the system, amount of exercise, nature of clothing, &c. In addition to these, the thermometer is of great use in churning and butter-making, and in the manufacture of cheese. When it is remembered that all these advantages may be secured by the payment of a single dollar, it is surprising that so few avail themselves of what may be so cheaply obtained. The best, clearest, and most accurate thermometers, adapted to the climate of this country, that we have met with, are those manufactured by Kendall of Rochester—the imported ones are mostly quite unreliable and catchpenny articles, many of them not running below zero, or above boiling, and therefore of no value for general purposes.

Ketchum's Mower.

Editors Country Gentleman—Last week I saw the operation of one of Ketchum's mowing machines. Several of them have been brought to this town this season for use. Its operations were unsuccessful, principally, as I thought, because of the rawness of both machine and operator.

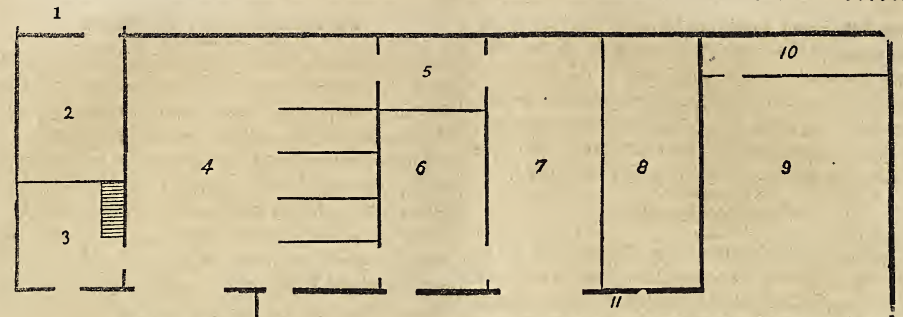
But I took my pen to name a great objection to these machines. The objection is this; the team must be driven to almost a trot, or much beyond a natural walk—entirely too fast for long endurance. This is one objection, and another is, they are too heavy both in weight and draft for an ordinary team of two horses.

I name these objections that they may meet the eye of the inventor, and if possible be improved.

And let me ask why our writers when writing about such implements, do not state such objections if there are any, that farmers may not be mislead in purchasing, and that the manufacturer may improve his machine?

I am a farmer—do not own a mowing machine of any kind, and have no other motive in writing the above than to suggest a little improvement.

Both the objections I have named are observed by all who have witnessed the operations of the machines. Yours, A. C. J. *Richfield, N. Y. July* 17th 1854



Plan of a Barn.

Mr. Tucker—With this you will find a rough draft of the ground plan of my barn, which you are at liberty to use if you think it will be of any use to the readers of your papers. The following notes will explain the plan:

1. Hog-yard, back of barn.
2. Hog-pen, 16 by 12 ft., with door to hog-yard.
3. Tool-shop, 12 by 12, with stairs to corn-house over head.
4. Waggon-house and horse-stable, 28 by 28 ft., with stalls for 4 horses. Large doors in front, into door yard, and small door into barn-yard—door into granary (5) and also into cow-stable (6.)
5. Granary, 8 by 12, with doors to horse-stable and also to barn floor, (7.)
6. Cow-stable, 12 by 20, with manger next to barn floor, and door into barn-yard and gate to barn floor.
7. Barn floor, 12 by 28, with scaffold over head, and large doors into barn-yard, and window.
8. Bay for hay or grain, 10 by 28.
9. Low shed, open in front, 20 by 24 ft
10. Hen-house, 4 by 20 ft.
11. Barn-yard.

The entire loft, with the exception of that over shop and hog-pen, is occupied for storing grain and hay, and has a floor laid double, and of course perfectly tight. Over shop and hog-pen is a corn room, 12 by 28. Dwelling house 150 ft. southwest of barn. The whole covered with best pine shingle, and siding and painted, at an expense of about $750. Wm. J. Pettee. *Lakeville, Ct.*

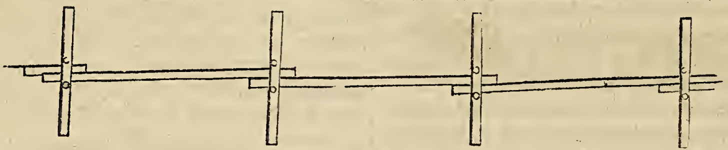


Fig. 2.

Improved Kind of Fence.

Messrs. Editors —The subject of fencing is one that is of peculiar interest to the farmer, and the inquiry is, "what is the cheapest method of building a strong and durable fence, and one that will not occupy too much land ?" We find that the old fashioned zigzag fence is neither strong nor durable; besides, it occupies about twelve feet of land, and that, on a large farm, will soon cover five or six acres. Another form of building a fence is of stone with a log on the top. This is very good while it lasts; but the stone, being heaved by the frost, soon fall down, and then the whole must be taken up and built anew.

We said the old zigzag fence was neither strong nor durable. Cattle or horses, that are in any wise inclined to be breachy, find it an easy matter to push it down, and the people of this windy country know for themselves that every heavy gale that blows, is apt to carry away more or less of it. We formerly used to spend three or four days every spring laying it up where it had been blown down during the winter.

But a new plan of fencing is now being put into practice that is likely to entirely supersede the old one, as it comprises all that a farmer can ask or expect of a rail fence. It occupies a space only four feet wide, and is built in the following manner. In order to be lasting, it should be built of cedar, or some other durable timber.

Fig. 1, represents the blocks and stakes as they are put together and ready to lay the rails in.

The cross pieces are called bunks and caps; the former four feet long, and the latter, two. The bunks should be from seven to eleven inches in diameter, and the caps large enough to admit of a three inch hole.

Two holes must be bored in each; eleven inches asunder in the bunks and nine in the caps. From some straight timber, stakes are split, four and a half or five feet long, according to the height the fence is required to be. These must be shaved six inches at the bottom, and at least fifteen at the top, so as to give the rails a chance to settle without making too large a space between the top rail (which is laid on the cap,) and the next one below it. Perhaps the accompanying figures will make the whole appear plainer to those who never saw any of the fence.

Fig. 2, is a ground plan of the fence when done. The rails should be laid side by side, and a block sawed to fit between the stakes, from four to eight inches

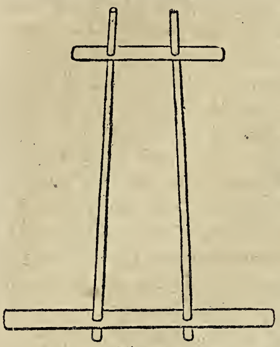


Fig. 1.

thick, according to the space required between the rails.

The blocks may be bored by horse, steam or water power, speedier and truer than it can possibly be done by hand.

The cost of building is so insignificant when compared with the quality of the fence when done, that no farmer can have the least shadow of an excuse for not adopting this plan without delay. This fence, when laid up well, is the most strong and durable known in this country. A Canadian. *Wolford, C. W.*

On Curing Hay.

Mr. Tucker—Having noticed in the Cultivator, the remarks of your correspondents upon the proper time to cut hay; and also deeming that that article did not embody the whole meaning comprehended in the term "haying," I have thought proper to pen for you, the following lines, which you are at liberty to make use of as you see fit.

It seems to me to make but little difference when hay is *cut*, unless it is properly *cured*. I have no doubt that the best time to cut hay, is when there is the most and thickest juice in it; as that is the only portion, essential in nutrition. It therefore becomes us to inquire how we can cure hay so as to preserve the juice with its entire stock of ingredients for the support of the animal for which it is designed. We think certainly, that it cannot be by the common practice of cutting, and wilting grass, and then drawing it into the barn, or what is worse placing it in stacks against a time of need. For by this method we obtain *sour* and *musty* hay. And why? because, when fermentation commences, it is carried too far, and instead of a *saccharine*, we have an *acid* product. But, if that hay was thoroughly dried, i. e., the watery portion of the juice expelled, there would be no such result. We all know that when hay first begins to heat, or ferment, that it smells extremely sweet; but not so when it has fermented until, when it is handled it is very smoky, and turned a reddish color. We have dried it until many of the large clover stalks, with the blossom attached, would break square in two; and old hay makers, and stock raisers, said it was entirely spoiled; and yet by putting 4 to 6 tons of it in at a time, it "heat" sufficiently to wilt, and settle so that in the winter following it was not so hard or stiff, as the same quality of hay that was fermented until the color was turned. In fact it is almost impossible to dry hay, cut at the proper time, so that it will not heat if put up in large quantities at a time.

Let your dairymen and stock raisers, ask themselves, how they would like to have all their bread fermented until it was *sour* or even *musty*, before they were permitted to eat it. What, think you would be the effect upon the health of the nation, were it generally adopted, and yet this is almost universally the case as regards the animals we daily use and draw nourishment from. Not only is such food unpalatable and unhealthy, but the chemical change that takes place, in a great measure destroys the fatty and muscular ingredients of the hay or other food. Again, we know that molasses or syrup, unless it is boiled down very strong, or the watery portion be expelled, will ferment, and become unfit for use, and thus again, it is with the juice of hay; unless it is sufficiently boiled down by the rays of the sun, it will become acid and rank, and unfit for the purpose for which it is designed. Holindo. *Hamilton, N. Y.*

Wheat Without Summer Fallowing.

Messrs. Editors—A young farmer who thinks himself too poor to take an agricultural paper and whose opinions and practices are consequently mere echoes and copies of those of his father and his more immediate neighbors, recently inquired of one of your subscribers what he thought of the expediency of turning under the sod in a field which had been in pasture for two or three years. The reason why he sought advice in regard to this matter, I found, was that he was to have in consequence of some derangement of his plans, both himself and his team more at leisure after wheat harvest than he previously expected, and that the old idea about the absolute necessity of a bare fallow and several plowings in the course of the summer still lingered in his mind, and made him fear that he should never get any pay for his labor in plowing up his pasture only once and that so late in the season. He feared he should get laughed at by the old hunkers if he could not point them to a good crop to stop their jibes and jeers. Summer fallowing is the *general* practice before sowing wheat all around him. This is the only method of putting in a wheat crop to which he has been accustomed. He dreaded the plan of once plowing without summer fallowing while at the same time he was unwilling to have himself and team lie comparatively idle during August and Sept.

He was advised by your subscriber to take every creature off the pasture so as to permit the grass and clover to get a little start; then to put on two teams and plow with a Michigan double plow 9 or 10 inches deep in August; and then with a small plow or cultivator to stir the soil at or before seeding, but not to go deep enough anywhere to disturb the sod. By adopting this method he was encouraged to expect, (inasmuch as the soil was not a very stiff clay nor very weedy,) as good a crop as if he had summer fallowed the field in the usual way.

Your subscriber was asked by this young farmer if he had seen in your paper any account of raising wheat in any such circumstances as those in which he proposed to do so. Nothing of the kind could be pointed out to him. Perhaps this may be because your subscriber's memory is poor or his examination of the Contents or Index too superficial. If any of your readers should have raised a crop of wheat, once or oftener, *without* summer fallowing, it might do good to many, if they would state the results of their new method through your columns. OBS.

Improve Your own Stock.

Occasionally we meet those who lament that they can do nothing towards obtaining an improved breed of animals because they cannot afford to avail themselves of imported or superior animals to begin with. To such we would hint that all the improved breeds now commanding high prices must have sprung originally from common stock. Some particular male or female must have been selected for some special good quality, and this good quality would be inherited more or less by the progeny of that particular animal. This must have been the starting-point of the most celebrated breeds of domesticated animals. Certain animals having some special superiority, must have been selected for breeding; and this quality being sought after and aimed at from generation to generation, and every auxiliary which good judgment could suggest in feeding and management, being brought to assist in the development of the quality or qualities desired, at length a breed of animals celebrated for some particular point of excellence was obtained.

Now if in this way all our distinguished breeds have been produced in the past and in foreign countries, the secret is at the service of those who think they cannot afford to get a good animal or the use of one to commence breeding from. But this may be only an apology for indifference, or for a very questionable economy. It will take generations, perhaps, to improve at home up to a point that one may start from by the expenditure of a few dollars.

Stabling Cows.

MESSRS. EDITORS—I saw an article in the Jan. number of *The Cultivator*, calling for information in regard to stabling cows, by "A Subscriber."

If your correspondent will adopt the English mode of fastening, I think his cows will be kept comparatively clean, with less trouble. These fastenings are sometimes called the "English Stanchions."

A timber is laid for the back part of the manger, or part nearest the animal's feet, which may be about 12 inches high; into this timber two upright scantlings, or stanchions, are placed about 6 inches for cows, and 7 to 8 inches apart for oxen, in the center of the stall; one of them, the far side one, is permanently set and fastened at top and bottom, the other or near side one, turns on a pin at bottom in a mortice that allows it to turn free; the top mortice should be some 12 to 18 inches in length, which is frequently made in a six inch scantling, placed exactly over the timber below and just above the necks of the cattle, and fastened to the partitions, or small posts between the stalls. When the cow has taken her place, the stanchion is raised to its perpendicular position; and as pins have been found to work loose by continual motion, and occasionally to get rapped out by the horns, it is now more generally secured by a block of timber say 15 inches long, which turning on a pin at one end, drops down into the long mortice back of the stanchion, as it is raised up to its place; a thin piece of board may be nailed to the bottom of the scantling under the mortice, to prevent the fastening block from falling through, and to avoid all posibility of its being rapped up by the horns; it is in this way made very secure, and no accident, or inconvenience to the animal need be feared.

The floor should be laid with short plank on a level with the bottom of the manger, and back from it to the hind feet of the cows, say 5 feet, the remaining part of the floor, (three to four feet is enough) should have a drop of 8 inches, i. e., it should be laid with plank running lengthwise with the stable, or at right angles with the former, 8 inches lower than the front part or platform on which the animal stands.

This will secure in a great measure, with ordinary attention, the object of "A Subscriber," as his cows will then lie down in their places, without any necessity, or disposition to step back preparatory to lying down, which is generally, the principal cause of the trouble complained of. The above mode of fastening is adopted to a considerable extent in this country, and if your correspondent will make a little inquiry among his neighbors, I presume some one will show him the plan carried out, and its mode of operation. Respectfully yours, &c. ELI MOORE. *Southington, Hartford Co., Ct.*

Experiment in Feeding.

WILL RUTA BAGA PAY TO FEED?—Having occasion a few years since, to feed a pair of large oxen and having a lot of Ruta Bagas on hand, I tried the following experiment. I commenced in December, when the one weighed 3,800 lbs. I fed them one week with hay and three bushels corn-meal at 75 cents, $2,25—increase 25 lbs. The second week, I fed them one and a half bushels meal and nine bushels ruta bagas—with this they eat very little hay—increase 50 lbs. The third week, fed the same as the first—increase the same, 25 lbs. The results stand thus:

1—3 bu. meal, $2.25—gain 25 lbs, at 6 cts.,........$1.50
2—1½ do do 1.12 } gain 50 lbs. at 6 cts.,. 3.00
9 do ruta baga, at 21 cts. }
3—The same result as the first.

I continued to feed according to 2d experiment and never saw oxen take on flesh faster and become sooner fit for the butcher. Be careful always to feed clear meal 2 or 3 weeks before slaughter as otherwise the beef may have the flavor of the bagas. My bagas cost me to raise about 6 cents a bushel. Cattle never cloy on bagas; and I conceive them to be the only root that will pay for raising to feed. All stock like them, I think them worth more than potatoes by the bushel, as they never scour as potatoes do, while 4 bushel of bagas are as easily raised as one of potatoes. G. W. P.

The Horticulturist.

The last number of this excellent journal, contains as usual a rich collection of practical matter, valuable to every gardener and fruit raiser, from which we condense a few facts and observations.

Ornamental Trees and Plants.—A communication from H. W. Sargent, of Fishkill, one of the most intelligent and successful horticulturists of the country, contains a list (with comments,)of some of the finest ornamental trees, shrubs, &c., among the newer sorts, that have proved hardy at that place—we present a very brief abstract:

Forsythia viridissima, blooming profusely and very early, and *Weigela rosea*, with roseate flowers late in spring, have been found among the finest of the newer ornamental plants. Among the newer Magnolias, proving as hardy as *conspicua*, *Soulangiana*, *tripetela. glauca*, &c., are M. *fuscata*, *cordata*, *Fraseri*, *longifolia*, *striata* and *gracilis*.

The following are highly recommended;—*Paulownia;* the different varieties of *Hawthorn*, including the pink, red, double white, and double red; the English *Azaleas*, and the newer Belgian varieties,—exceedingly gorgeous; *Deutzia scabra* and *gracilis*; *Ribes sanguineum* (double) *R. Gordoni* and *speciosum;* double flowering sloe; *spriræa prunifolia*; the double pink, white, and yellow horsechestnut, and dwarf horsechestnut.

The Chinese Wistaria, kept well cut back, assumes ultimately the character of a weeping tree, *and blooms through the summer.*

The *Virgilia lutea*, not new, but little known, is very highly and justly commended in this article.

The hemlock. English yew, and beech, are recommended for the most *ornamental* hedges. The Buckthorn, Washington thorn, and Osage orange for utility.

The Norway is pronounced the finest of all the maples. A large list of exotic forest trees are enumerated, which our limits prevent naming.

We cannot fully agree with the writer in one thing—and that is in admiring so many *weeping trees*—most of them are at best but distortions of nature.

Minnesota for Fruit.—An interesting communication appears from G. C. Merrifield, on the climate and fruit of that territory. It appears that the thermometer sometimes sinks to 35° below zero, yet all the more common kinds of fruit but the peach and grape appear to succeed well. The past winter, when the thermometer twice sunk to —35° was rather severe on young heart cherries; the dukes and morellos were uninjured. Plums, dwarf pears and apples escaped injury. A striking difference was found in the hardiness of young root grafted apple trees (as we have before shown for the north western portions of the Union,) and the following list is given of these:—*Entirely hardy*,—Peck's Pleasant, Autumn Strawberry, Porter, Red Astrachan, Fameuse, St. Lawrence, Early Joe, Summer Pearmain, Tallman Sweeting,[*] Lady, Wagener, Pomme Grise, &c. *Slightly affected*,—Gravenstein, Swaar, Esopus Spitzenburgh, English Russet, Rawle's Janet, White Winter Pearmain, Yellow Bellflower, White Bellflower, Sweet June, Domine, Northern Spy, Early Harvest, Golden Sweet, Red Detroit, &c. *Severely injured*,—Vandevere, Maiden's Blush, Ladies Sweeting, Summer Rose, Summer Queen, Newton Pippin, Rambo, &c. We give this list for the sake of comparison, as in some particulars it differs from other similar lists; and to assist fruit raisers in that territory to select the hardiest for root grafting.

The Clinton grape proved perfectly hardy; the Isabella was injured, some being killed down to the ground.

Gooseberries, currants, and hardy raspberries, were uninjured.

Peach trees were badly scorched, but are sprouting up again. Worked trees proved quite as hardy as any.

From the above, it is inferred that apples, pears, plums, Duke and Morello cherries, and small fruits generally, may be successfully cultivated there.

It appears remarkable that the spring should open there sooner than in western New-York, by a week or two, but the last spring was an exception in New-York to every thing that preceded it, the weather being reversed, and the warm first and cold afterwards.

There are many influences operating in the destruction of vegetable growth in winter, besides severe cold,—such as too much moisture, sudden exposure to the sun's rays, rapid changes of temperature, absence of snow on the ground, &c. On another page of the Horticulturist, we find an account of the destructive effects of the winter in Michigan, having a milder climate than Minnesota, and the past winter not unusually cold there. The changes were frequent and sudden, and the ground bare. Many peach and dwarf pear trees have died—strawberries generally died unless protected. The particular locality in Michigan where this occurred, is not given.

Early Cherries.—The editor states that the *Belle d' Orleans* proved the present season the earliest of all cherries, *Early Purple Guigne* and *May Bigarreau* immediately following. In other seasons, the two last have ripened first. The next earliest after these are *Early White Heart*, *May Duke*, and *Coe's Transparent*. [We have found the *Doctor* a better cherry than Early White Heart, ripening sooner, and bearing as abundantly. *Gov. Wood*, *the best of all cherries*, is nearly as early.]

Culture of the Gooseberry.

Our readers are familiar with the fact that the English varieties of the gooseberry, which succeed so admirably in the land of their origin, often entirely fail from a peculiar mildew, under the hot suns of this country. We observe in a late number of Moore's New-Yorker, a successful mode described by R. B. Warren, which has apparently much to commend it. He has not been successful by the usually recommended remedy of

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[*] Not "*Tolman*," as Downing and others had it—the man from whom the name is derived, misspelled his name, and the bad orthography should not have been copied. Tallman is the universal and correct mode.

mulching, but plants his gooseberries on the *north side* of a common board fence, which is doubtless useful as affording a partial shade; but the most important part of the operation consists in placing a peck of yard manure compost every autumn around each bush, to be spread over the ground and spaded in the following spring, and kept well hoed through summer. The old wood is pruned out every spring, and straggling shoots pinched during the season of growth. The Crown Bob and Whitesmith have borne "enormous crops" of fruit for the four past years by this treatment, without any mildew; and there is no doubt that the amount of enriching compost worked into the soil, whose surface is kept constantly mellow, operates in a manner equal to any mulching for the preservation of moisture, while the pruning and fertile soil produce a vigorous growth extremely favorable to the healthy maturity of the fruit.

Grape Culture.

Messrs. Editors—Will you please inform me, through your very valuable paper, *The Cultivator*, about the grape. How many vines should I have to the acre—which way should the rows run —what is the average bearing of the Isabella and Catawba, when under a good stste of cultivation—are leached ashes good manure for them—is it as profitable to sell the grape by the basket, as to manufacture into wine and then sell—and when is best time to cut slips? What is the best soil? S. W. Cowles. *Unionville, Conn, July* 11, 1854.

The plants for a vineyard should be about 5 or 6 feet apart. We have never discovered much difference as to the direction of the rows, good culture and rich soil being the main requisites. Some prefer rows running north and south, so that the sun may shine equally on both sides. The Cincinnati vineyards have the vines trained to single stakes, so that all sides are equaly exposed. We do not know the amount of crops actually produced from an acre of grapes. A portion of leached ashes is good for the grape, but like most other plants, it is mainly benefited by a mixture of vegetable and animal manure, in which stable dung should be most abundant. The soil should be deep, loose, mellow, and rich, and should not by any means have a wet subsoil. Subsoiling or trenching should always be practiced, and when necessary, the most thorough system of under-draining. The cuttings are made in autumn or winter. We should not by any means recommend the attempt to manufacture wine in Connecticut,—selling the fresh fruit in the cities will be foun far more profitable, especially since they may be so easily kept till winter. Should our correspondent wish full information, he may find further directions in Elliott's Fruit Book, and in Buchanan's Treatise on the Vine,—although both of these books favor the general manufacture of wine beyond what we think beneficial to the interests of the community.

The Windham Co. (Ct.) Ag. Society hold their next Fair at Brooklyn on the 13th and 14th Sept. We are indebted to J. B. Whitcomb, Esq., Rec. Sec'y of the Society, for its list of prizes.

Flooring for Stables—Walls for Open Cisterns, &c.

Those who live easily accessible to cities or where gas-tar may be obtained, may make a hard and waterproof coating, by a mixture of gas-tar and coarse sand. We have seen compact, floor-like walks in gardens and pleasure grounds, made in this way, at a moderate cost, and on sloping surfaces, it possessed the eminent advantage of never being liable to wash. As the water does not enter it, it is not cracked nor affected by frost. Water-lime cisterns answer a good purpose for retaining water, where the frost cannot reach them; but one freezing completely ruins them. This is not the case with the tar and sand; hence it may be used for open reservoirs, small ponds in ornamental grounds, &c. Impervious stable floors may be made in the same way, which will possess the advantage of carrying off without waste all the liquid portions of the manure, to tanks, reservoirs, or absorbents placed for this purpose. Common tar would probably succeed better than gas-tar, but is much more costly—we have known where a small portion of tar had escaped from a barrel on a bed of sand, a compound formed as hard as sandstone, and which was not in the least affected by the freezing and thawing of successive winters.

Fall Plowing.

Mr. L. Tucker—In the Feb. number of *The Cultivator*, I noticed an article on fall and winter plowing, in which it was highly recommended to plow in the fall, except on sandy or sandy loam soils—the writer taking the ground that such soils will leach if plowed in the fall. I do not know but it is so, but I have yet to learn that if you plow such a soil in the fall, it is at the hazard of its fertility—especially if it is sward land, and the first crop is intended to be corn. Instead of the action of the frost and snow of winter, increasing the porosity and friability of such a soil, it tends to settle it down together, and renders it less liable to be affected by the drouth, which is something to be thought of when we have such dry seasons as we have had for two years past; and then the sod rots earlier than it would if it was plowed in the spring, and gives its fertilizing qualities as a manure to the young corn as it just commences to grow—a time when it is needed if ever, to push it forward, so that the hoe can be used to keep the weeds in subjection. Last year I had a field of corn of some eight acres; a little more than half, was plowed in the fall, and the rest in the spring. When I came to harvest it, that plowed in the fall, was nearly if not quite one-third the best; a great deal heavier growth of stalks and longer ears; and it stood the drouth better by half. Where it was plowed in the spring, the corn leaves began to roll a week or ten days before they did where it was plowed in the fall; and when there came any rain, it seemed to leach through and leave the ground as dry as ever. I am in favor of fall plowing for any crop. It is equally as good for other crops as for corn, as far as my experience goes. A Subscriber. *Malone, N. Y.*

Address of A. B. Dickinson.

GRAZING AND BUTTER MAKING.

We have not for a long time met with an agricultural address containing such an amount of condensed practical matter, and exhibiting such a degree of close observation and shrewdness, as that of A. B. DICKINSON, of Havana, N. Y. before the Tioga Co. Ag. Society, Pa. It is wholly devoted to the subject of grazing in its different aspects, and although some of the views expressed may not receive the full assent of all farmers, yet there is much to interest and instruct, and much that is suggestive of improvement. This address affords a strong contrast with the many we receive from different quarters, characterized with theoretical and pseudo-scientific reasoning, and as such it cannot fail to please those who have become tired of discourses on husbandry from learned and eloquent men from towns and cities. Our readers will find much to interest them in the following extracts; the first on the subject of *dairy pastures and butter making:*

The first quality of butter-land is confined to portions of the New England States, New Jersey, Pennsylvania and New York, while cheese can be made and sheep grown wherever grass grows, as I will endeavor to show hereafter. First quality of butter has been worth, on an average, for the last twenty years, twenty five cents per lb. Last year it brought, in New York market, thirty-one; this season twenty-five cents; and when I speak of these prices I mean the very best quality that can be made, which is very small—but might be very much increased. You have here all the elements for making just that kind of butter. To begin with, you must have in your pastures Timothy, White Clover, Blue Grass, Red Top, or Foul Meadow Grass, which I think is one and the same thing, only differing as it grows on different soils, pure soft water, and a rolling or a hilly country. All these things you have, or may have, as these different grasses will all grow well, if sowed and properly cared for; and I have never seen the first pound of good butter made where the cow did not feed on some or all of these grasses; and it cannot be made from these until they have been sown long enough to have the soil swarded over, to protect it from the sun, frost, and drouth. There will be then, and not till then, a solidity and sweetness to the grass that will give to the butter, that rich, sweet flavor which makes it so desirable. Butter partakes not only of every thing the cow eats and drinks, but of every thing offensive within its reach after it is made; as for instance, if a cow be fed on Rutabagas, her butter and milk partake of that flavor. If she feeds in pastures where leeks, garlicks and wild onions grow, there will be a still more offensive flavor. If she feeds in pastures where she can get a bite of briar leaves, beech or apple-tree leaves, or any thing of the kind, it injuriously affects the flavor of the butter, though not to the same extent, and would scarcely be perceptible for immediate use. So with red clover. Butter made from cows fed on red clover is good when first made, but when laid down in packages six months or a year, it seems to have lost all its flavor, and generally becomes more or less rancid, as the clover was of rank and rapid growth on which the cow fed. The water the cow drinks must not only be soft, but clear, living, wholesome water, fit for the use of man. If she drinks from stagnant, filthy water, it will knock off three or four cents the pound from butter, all other things being right. In the wetstern country, on plain or prairie, the most of the water, in dry seasons of the year, is in stagnant streams, or pools covered with a green blanket, and just in the same proportion as it is offensive to the smell or taste of man, it will exhibit itself in butter, when laid down and kept for any length of time; and yet none nor all of these things on which the cow feeds injuriously affect the making of cheese, for the reason that the rennet necessary to form the curd, gives so sharp and different a taste, that all others are neutralized. The work of making butter is not completed when you have every thing necessary for the cow to feed on; you must provide a good spring-house where every breeze is as sweet as that wafted from the rose itself; and every thing not only cleanly, but the butter must be worked at the right time and every particle of butter-milk must be worked out; and when that is done the working must cease. A little too much working spoils the grain and it becomes oily, and is only a second or third rate article. Salt must only be used in sufficient quantities to make it palatable, as salt is not necessary to preserve butter any more than it is to keep lard. Be sure to use Liverpool or Turks Island, as no other Salt has stood the test, although Onondaga saves pork just as well, and beef and butter reasonably well for immediate use; but for keeping until the next spring, it is not so good, as its flavor is lost. Great care should be taken in selecting salt, as the manufacturers, at Syracuse, have become very expert in grinding and putting up their salt in imitation of the Turk's Island and Liverpool, and yet the butter when salted with Onondaga salt, after lying six months in packages, never fails to disclose the fact by a loss of two or three cents on the pound to the manufacturer.

The superiority of *rolling* land for pastures, is attributed to the ready drainage, preventing the mildew of the grass in rainy seasons, so injurious to the flavor of butter. Would not a thoroughly tile-drained pasture possess all the advantages of a hill-side?

On the subject of the *profits* of keeping cows, and the management of permanent pastures, we quote the following remarks:

A first rate cow well cared for, will make 200 lbs. of butter in a season, that is one pound a day for two hundred days, and that at 2s. per pound is $50. Her milk will make 100 lbs of pork worth six dollars more. We will call three acres sufficient to keep one cow a year, which is a large estimate for good grass land. This is a better business than can be done on the best wheat-land in the country, with this advantage, that every year, the farmer uses his farm for grazing it is improving; if like these grass-lands in sight, they will improve at least five per cent a year in productiveness, if properly used. I do not want to hear a farmer say that on such land, his meadows or pastures are running out. I can only say to that farmer he does not understand his business; and if he will sow one bushel of plaster on each acre of land, every year, and not pasture his meadows after mowing, neither in the fall nor in the spring, nor turn into his pastures until there is something for his cattle to eat, he will in a very few years have meadows that will average two and a half tons of hay to the acre; and one acre and a half will pasture a cow through the season, and two and a half acres keep a cow the year. In twenty years, by this system of farming, dairy lands now, would become fatting lands. And what I mean by fatting lands is where pasture is so nutritious that steers will fat in pasture, from the 10th of May until frost affects the pasture in the fall, as fast as the most skilful feeder could fatten them, on the best of hay and as much grain of all kinds as he chose to feed them. That I

> call fatting land. Of this quality of land there is far less than of dairy lands, and it is more scattered, yet they are the best dairy lands in the world, where the water and climate is good, and no offensive vegetable grows with the grasses.

On the subject of permanent pastures, we are not surprised that there should be some difference of opinion, and that many graziers should esteem them so much superior to those more frequently seeded down. A remark in a subsequent part of the address serves to explain the reason of this reputed superiority. The stalks of the hay from new meadows we are told, are "*coarse* and hollow, and but little better than straw,"—which is wholly in consequence of the sowing grass seed too thinly. Apply half a bushel of seed per acre, and *the crop will not only be doubled in quantity*, as we have proved by experiment, but from its thick and fine growth, it will be greatly increased in *quality*.

The following is a large story,—on the productiveness of cows, but as it is given on good authority we quote it as we find it; and we hope our friend of the American Agriculturist, who wholly discredits the account of the celebrated Oakes cow, (as we see by a late number of that journal) which was claimed to give but about 16 lbs. of butter per week, or 5 lbs. less than these, will examine into this matter, and either procure authentic evidence of its correctness, or establish its error.

> I have made forty-four and one-half pounds of butter from two cows in seven days; more than three pounds each, per day. They were well wintered and were fed back not only their own, but as much other milk, as they would drink. Their average weights of milk per day, was over fifty-four pounds. They were the best out of a lot of more than two hundred dairy cows.

We close these copious extracts from this address (which we trust will not be found to contain a word too much) with the following valuable directions for preparing butter for market:

> I think I did not add more than one half of a pound per day each in the quantity of butter, by feeding back the milk, as it was at the time when the pasture was at the very best. This extra feed would have kept this large quantity up when the grass was not so good.
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> The butter was good—but not first quality, not so solid nor as highly flavored as that made on pure grass. I am thoroughly convinced that nothing that has ever been tried will make the very best of butter, except the grasses which I have mentioned. The butter made on the sweet scented vernal grass is as good as any when first made, but like that made from red clover when laid down in packages loses its flavor.
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> If the first quality of butter could be made from any or all kinds of roots, the Dutch would have succeeded in this, as they are, to say the least, as neat and untiring in their pains to accomplish this great object as any people on earth. Although their butter is good and brings the highest price in London market, yet it is not of the best quality, and never brings within five or six cents the pound of the highest price of our very best butter, nor do I believe they make much, if any, of the very best butter in England. Of this, however, I do not pretend to know, and only speak from facts that I have witnessed in the market, as a dealer and maker of butter. Last season when butter was very high, there were large quantities imported. At that time nearly all the steam vessels, purchased in the New-York market, of our best butter for their own use, not only for their out, but return voyages—whilst we were exporting Southern Ohio, Indiana and Illinois butter, not worth more than lard in our markets. If the English make the best of butter, the Holland butter would not bring the very highest price in the London market, any more than in New-York.
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> The Holland butter brings in our Southern market the highest price, as none of the very best Dairies are shipped to Charleston, Savannah or New Orleans; as there is a great demand in New-York for all of the best quality of butter made, and room for more. To make this butter you must churn all the milk, as well as cream, and churn it before it sours, as the sour or rancid taste in the cream can never be eradicated from the butter. A horse is the best of all animals to churn, and no matter if he churns six hours, as the milk should be churned sufficiently cool, which should be tested by a thermometer, to have the butter come solid.
>
> Firkins, before butter is put into them, should be soaked in strong brine, then filled with sweet hay and hot water, and be allowed to stand until the water is cooled. When the firkin is filled, put a cloth all over the top, cover it over and keep it well covered with a brine made of salt, salt-petre and loaf sugar, until it is sent to market. When you have done all this, procure a tryer, and before sendinng to market, try every package, and if, at any time, your cows have eaten any roots, cabbage, or anything else they should not, you will find it in the butter. Go to market with your butter, and sell it yonrself, and take your wife along, as she is the best judge; as ladies rarely smoke or chew tobacco, aud no man that does either, can detect the finer flavor of the nicer qualities. Thousands of men and women have lived and died in good dairy countries, and never tasted a first-rate article of butter in their lives.
>
> I said, go to market with your butter, yourselves, and secure a customer; if your butter stands the test, you will not have to go the next season. The factor who handled it the last year, will be anxious to buy your butter again, as he has his customers who do not regard the price, if the butter exactly suits; and the last year's butter, if good, establishes your character as a butter-maker, and will enable you to obtain a penny or two a pound over last year's prices.

North Western Pomological Convention.

The next Annual Meeting of this Association will be held at Burlington, Iowa, commencing on the last Tuesday (the 26th) of Sept. at 10 o'clock, A. M., and continuing four days.

Communications are solicited on any or all branches of Horticulture, which, together with any boxes of specimens, may be directed to the "N. W. Pomological Convention, care of Messrs. Averv, Burlington, Iowa." F. K. Phœnix, Cor. Secy.

Our western pomological friends have already exhibited, at their previous sessions, a great deal of energy and enterprise, and an amount of maturity both in the knowledge and the successful culture of fruit, more especially of apples, that would do credit to the best pomologists of the whole country. No one, therefore, even at the far east, need fear any disappointment from undertaking a long journey, to visit this convention; and we know that contributions of rare or valuable specimens of fruits will be appreciated.

The Season, Crops, &c.

Mr. Tucker—I forward you a few lines, respecting our crops, and weather, taking it for granted that you are anxious to learn how affairs prosper among us.

Well, we have had, all summer, and now have *drouth, drouth.* We have had but little rain since the eclipse, on the 26th of May. To be sure, we have had occasional sprinkles, but there has not enough rain fallen at one time to wet the soil, more than a half an inch in depth. The wheat crop, which is now harvested, and suffered but little from the insects, was much lighter, in consequence of the drouth, than it would have been, if there had been more rain. On the whole, the wheat crop is considered very light. Although there are many very good pieces of oats and barley, it is estimated that there will be but little, if any more than half of an ordinary yield, on account of the drouth. Indeed, there are many fields, of both oats and barley, the straw of which is so short, that it is very difficult to gather it with a cradle ; and after it is cradled, it is almost impossible to rake it at all clean, because it is so short.

Corn, we fear, will be a complete failure. Hundreds of acres have been plowed under, and buckwheat sowed where it stood ; and serious apprehensions are entertained, that buckwheat will be *nothing at all*, should it come up, which it has not done in a great many instances. I have about five acres of corn, the soil for which was prepared in the best manner, and highly manured, with barn-yard manure, and top dressed, and I do not expect to have a *single bushel* of corn on the whole piece. While some of it never came up at all, some is six inches in height, and some six feet. But the best of it gives little evidence of fructification. There has not enough rain fallen to slack the lumps or to wet the manure. Ashes and gypsum, that were applied as top dressing, six weeks ago, remain undissolved. And I discovered yesterday, kernels of corn in the hill, unrotted.

It extorts a sigh to look at our pastures, and meadows. Most meadows look as barren as they do in the middle of winter. But few farmers got more than half a tun per acre. Pastures are all drying up ;—and the first idea, as we look at them is, *how fire would rush over them!* Should this weather continue a little longer, all our stock must be fed at the barn. The first and last words among neighbors are, "what shall we do for pasture, and what are we going to do for water, for our cattle?" Were you to go through the town, and inquire how much the dry weather has damaged each farmer, the answer would be, according to the size of the farm, from $50 to $500. It is no uncommon thing to hear farmers, who own about one hundred acres of land, say that the present drouth has damaged their crops from one to three hundred dollars.

How futile are all our science, our judicious management, our thorough preparation of the soil, and our most efficient fertilizers, if our bountiful Benefactor does not send refreshing showers in due time. Truly yours, S. Edwards Todd. *Lake Ridge, Tomp's Co. N. Y.*

Remedy for Wheat-Weevil.

In answer to a recent inquiry, we gave it as our opinion that one of the most promising means of avoiding the weevil, was to sow early wheat on good soil, that it might advance towards maturity soon enough to escape the depredations of this insect. Since making this suggestion, we have conversed with a skilful farmer of Western New-York, who lives in the midst of a fine wheat region, (where the soil is rather light and gravelly, but usually produces excellent wheat,) and who has given it as his opinion that the severe weather of spring added to the attacks of the insect, has reduced the crop in this region to an average of *ten bushels per acre*, or one half the usual average, which is estimated at twenty bushels. He has just cut a field of the finest wheat, that has yielded over *thirty bushels per acre*, and a single weevil was scarcely to be found in any part. This crop was put in just at the close of summer—very early—on ground prepared as follows : A pasture possessing a fair amount of fertility, was well plowed with a double team, and a good dressing of well rotted or compost manure spread over the inverted sod. It was then thoroughly harrowed, to break it fine, and to mix it with the soil—an operation of great importance. The whole was then turned under with a gang-plow, without disturbing the inverted sod. The wheat was then sown with a drilling machine. The soil was rather gravelly, not liable to become water-soaked, and none of the crop was winter-killed. This gentleman gives it as his opinion that wheat put into the very best soil prepared in the best manner, and sown as early as the last of summer, need excite no apprehensions of the weevil—he thinks it will be quite safe. Other wheat, which he harvested this year from ground last year in corn, was half destroyed, and he intends to raise none but in the thorough manner above described.

Salt for the "Grub."

Several agricultural papers have reccommended the broadcast application of a few bushels of *salt* per acre, as an efficient means of destroying or repelling the grub and cut worm. A late number of the American Farmer gives the report of an intelligent and enterprising farmer on this subject, as follows :—His corn-ground, previously clover and grass, was found "literally filled with grub and cut worms." He applied 2 bushels of packer's salt, and 2 bushels of plaster well mixed, per acre. The insects were destroyed, and the corn saved. Now, this quantity of salt, when dissolved into the soil, would not constitute a *ten thousandth part*—can it be that so minute a portion actually destroyed the insects? Was not their absence owing to some other cause? We have formerly applied salt in a dense circle around the stems of cabbage plants, to exclude the *grub*, but have found that he did not hesitate to crawl through the pure salt, and after destroying the plant and having filled himself, we have in some instances found him very coolly and quietly reposing *in the salt*, apparently without the slightest inconvenience. It strikes us that we need futher experiments on this subject.

Adulteration of Concentrated Manures.

Every man must know by a moment's reflection, that when such high-priced manures as sell for fifty dollars per ton, are in active demand, there is a prodigious temptation on the part of every dishonest dealer, to sell adulterated mixtures, if he can save by such a miserable operation some twenty dollars or more per ton. The market in England for guano and superphosphate of lime, has lately been more than exhausted, and this has brought into requisition all the different modes of adulteration that ingenious rascality could suggest. If fraud *has* generally prevailed in England, we do not see why it *may* not also prevail in equally honest America, and we feel bound therefore to put farmers and purchasers on their guard,—especially against those who keep their processes secret, by placing "*no admittance*," even to scientific editors, over their door.

Prof. Way has recently published several analyses of adulterated guano, showing the nature of the frauds practiced. It appears that a favorite ingredient for this purpose is gypsum, because, like guano, it burns whiter, and becomes lighter in weight, and consequently is not easily detected. Some specimens in market were found to contain more than fifty per cent of this ingredient. Scoundrels of a bolder stamp resort directly to the sand and loam pit. Two years ago, and possibly at the present time, there existed an organized factory near London, with drying stoves, reverberatory furnaces, and grinding mills, for the sole purpose of drying, pulverizing, and preparing loam for the use of the guano manufacturer, where it might be had of every variety and of all shades of color. Prof. Way found some specimens of marketed guano to contain about 50 per cent of sand and clay, besides considerable portions of gypsum—some of these guanos being found with but little over one per cent of ammonia, while the best Peruvian article contains over 17 per cent.

The scarcity of guano in England has run the price up to thirteen to fourteen pounds per ton, or over sixty to nearly seventy dollars; and farmers in our own country have for some time past had to pay fifty dollars. It will do no harm to be on their guard, in relation to this as well as other marketed manures. Honest dealers will not fear investigation, but will rejoice in it. The price is "eternal vigilance" and fifty dollars besides, but the outlay often pays well.

How to Destroy Yellow Dock.

Messrs. Editors—It seems that the yellow dock is troublesome in other localities as well as here. An inquiry in a late number of the Country Gentleman, how to exterminate them, has attracted my attention. It is about twelve years since they made their appearance in my fields; at first I paid but little attention to them, for they did not increase fast; but after getting the seed into the manure they began to multiply rapidly, and in making some effort to subdue them I found they spread and propagated from the root as well as the seed. I began to feel alarmed, for they were becoming very numerous in all my grass lands, and how to get rid of them I did not know, but formed a resolution three years ago to wage a war of extermination in some way.

I sent to an ag. ware-house in Boston, and purchased a pair of stiff heavy plate subsoil spades, 16 inches in length; I ground down the lower edge sharp, and after the haying season was over, put two men at work in the fields, cutting them off from 6 to 10 inches below the surface, and then pulling up the part of the root thus separated with the fingers, and after letting them lay upon the ground until wilted, gathered them up and put them into a pile on the side of the highway. I employed these men for the most part of three weeks in this operation, and gathered a large quantity of these roots which have rotted down on the roadside, and they have never appeared above the surface where they were cut in the ground. Some small ones escaped the eye of the workers, and seed was in the hay of that year, so that I must repeat the operation this year, but there is not one now where there were five before I cut them three years ago.

I believe if they are cut off 6 inches below the surface, pulled up and removed from the field, it will stop them; they will not sprout or vegetate from the part of the root left in the soil. The part left is too far below warmth, light and air to start into life anew.

I have written these few lines that your inquirer may try the experiment if he chooses. It has answered a good purpose with me, and I think all farmers should be prompt to impart their experience whenever and wherever it is required and may prove an advantage to others.

This root is said to possess medicinal qualities, and is often sought after by botanical doctors, or as some would say "professional quacks," but as they flourish only in a rich soil, and take possession of our best lands, we can hardly afford to suffer them to remain for this purpose. J. W. Colburne. *Springfield, Vt. July* 19, 1954.

Fruit Growing in Canada.

Messrs. Eds.—I am trying hard to cultivate fruit in 44½° north, which I find to be a difficult thing to accomplish. I have 70 varieties of apples; many of them were lost last winter by the cold. I should like to get instruction in regard to this evil that I have to contend with. I have not raised much fruit to boast of, but I have an Isabella grapevine that I am proud of. In the spring of 1851, I planted a slip of the vine, that is three years last spring, and it now stands on the trellis with one hundred and twenty-one fine stems of grapes. I am on the south shore of the Rideau Lake where it is six miles wide, which keeps off the frost two or three weeks in the fall. My peach and nectarine trees are dead. I have twenty varieties of the sweet cherries;—some trees grow middling well; others die. I think they cant grow in this country and do well. I have pear trees on the quince, that are now well loaded with fruit; others that I think will fail. I should be pleased to learn if there are any varieties of pears that will do well as far north as this. W. H. Sherwood. *Portland, C. W.*

CURE for GAPES—DORKINGS with YELLOW LEGS.

Mr. Editor—Of course you know every thing; for, do you not publish a newspaper?

From the ocean of knowledge, may I ask for one little drop? In return I will tell your readers how to cure gapes in chickens.

Cure.—Perhaps you will call my prescription Irish, for I shall say do not let them get sick; and, as it is quite practicable, I think it excellent Yankee, if not perfectly good English.

Some of our hens run at large, have access to pure water when they please, and having a wide range, are usually fed but once a day; others are kept in coops, each hen having from fifteen to thirty chickens; and are fed regularly three times a day with a mixture of Indian meal with wheat bran, potatoes, sour curd, or any thing that happens to be convenient;—we have discovered no difference in the effect of food. Two or three times a day their dishes, of tin or iron, are well rinsed and supplied with clean water; the coops are moved their width, or more, once or twice a day.

Last year we had about ninety chickens; this year, about one hundred and fifty; except upon the list of killed by casualties, or caught by vermin, we have to report the loss of only three; which occurred last year, in the following manner. During a sudden illness in the family, the chickens were only so far inquired after, as to ascertain that they had food and water by them; at the end of three or four days, three were dead or dying with the gapes, more were badly affected, and all (twenty-five) were drooping and sickly. The coop was moved several rods, a drop of spirits of turpentine was put into the windpipe of two or three of the worst cases, their usual habits resumed, and in u short time they were all as bright and cheerful as ever. We have not had a case of gapes since.

Now for my question;—May not Dorking fowls have yellow legs? Some of your correspondents say they *must* be white. Among my schoolday recollections, is the image of

> "An old white hen with yellow legs,
> That laid her master many eggs,'

which was immortalized by the poet for her discretion in declining to walk out one bright moonlight evening with the agreeable and gentlemanly Mr. Reynard;—she has ever been my beau ideal of a perfect hen; and the impression was doubtless strengthened by seeing my mother invariably prefer such for the table. When some of my own beautiful white Dorkings appeared, supported upon golden pedestals, provided with the requisite number of toes, I smoothed their little downy heads, with more than ordinary satisfaction, and considered them quite the aristocracy of the brood. Am I now to be told that they are therefore not Dorkings? I have even thought of writing a book upon poultry, so as to be deemed authority, but unfortunately, I must say (just under my breath of course,) that I have nothing else to put in it, for I do not know a Shanghai from a Cochin China;—so in my perplexity, Mr. Editor, I appeal to you, and if it has never been permitted before, do grant a dispensation to Dorking fowls, to wear yellow legs. Alla Du Pays.

Our correspondent, to whom we are already indebted for several very interesting communications, will please accept our thanks for the above account of her experience in the poultry yard. We should be glad to return the favor by solving her problem, but a consultation held in our library, shows so much disagreement on this subject among the doctors, that rather than take the attitude of umpire ourselves, we beg leave to refer to the Editor of *The Poultry Chronicle* for a solution of the difficulty.

Meanwhile will not more of our own poultry fanciers and breeders let us hear from them on the different matters connected with fowl raising and its accessories?

Raising Corn for Fodder.

Messrs Editors—I read your article on "Sowing Corn for Fodder," in the July Cultivator, with considerable interest, but I have a mode of raising it differing slightly from yours. It is this: Sow in drills one and a half feet apart at the rate of about four bushels to the acre, and when just up sow on the rows plenty of plaster, (say three or four bushels to the acre.) When six or eight inches high, run through it with a small corn plow or cultivator, made very narrow. Commence cutting to feed green, every alternate row, when about two or three feet high, and get over the field by the time the corn is four feet high if possible; then turn and cut out rows two feet wide cross wise.

The advantage of this method is, that, (if the soil is *rich*,) we will have left on the ground all that can stand up, and will have all that is cut up clear gain, which is several tons. I think an acre will produce nearly twice as much in this way as to have the rows three feet apart in the first place.

I wish some of your correspondents would weigh the product of an acre, and communicate the result to the public through the Cultivator. I believe it would astonish all who have not tried the experiment. I sowed mine this year on the 17th of May, and from some experiments in cutting and weighing, I believe I have places in my field that would, if weighed now (July 10th) green, amount to near 60 tons to the acre. W., *Oswego, July 10th*, 1854.

Ground Hay.—Every intelligent person knows the advantage of ground grain and chopped hay for animals, assisting, as the operation does, the finer mastication of the food by the animal, and consequently securing the digestion of a larger amount of the nutriment. The question arises, are there not instances where still greater advantages may be gained by a finer pulverization of food? A writer in the Germantown Telegraph thinks that *ground hay* will possess sufficient advantages over the crude material, to repay well the expense. Whether any thing more than chopping it exceedingly short, (say the thirtieth of an inch) will be useful, is of course entirely conjectural at present, but would not a set of experiments on this subject be well worthy of trial?

The Flower Garden.

SUMMER FLOWERS.

The Tiger Flower.

THE TIGER FLOWER.

One of the finest,—most showy, and brilliant flowers that ever bloomed in a garden, is the Mexican Tiger Flower—a plant which has been known many years to cultivators, and which, but for one difficulty, would now be as common as roses and tulips. This difficulty is the tender character of the bulb, rendering it neccessary to take it up on the approach of winter, and preserve it like the root of the dahlia.

The Tiger flower has the eminent advantage over many other bulbous flowers of blooming for two or three months in succession, after most other flowers are gone, or throughout the latter half of summer and early part of autumn. The flowers open in the morning and fade before evening; yet a constant succession on the stem keeps up a continued supply. Any good soil will answer for this plant, but the size and beauty will be much augmented by planting it in a bed made on purpose, of equal parts of manure and white sand.

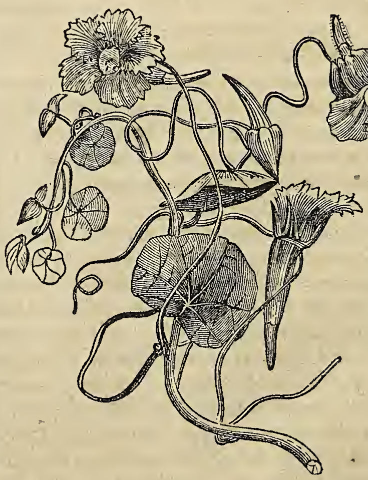
As a touch of frost will destroy the bulbs, they may be kept tlrough winter by first drying them two or three days, and then, after cutting off the tops, by packing them in a box of dry sand, which may be kept on a shelf in a moderately dry cellar, or in a green-house.

There are two distinct species of this plant,—the red, or *Tigridia pavonia*, which is of a rich orange crimson; and the yellow, or *T. conchiflora*, which has a rich yellow color—both these species being spotted with rich purple and dark crimson in the bottom of the cups.

FINE SEEDLING PETUNIAS.

Messrs. Editors—Last year, when making up my flower garden, I procured four varieties of petunias, the finest I could obtain, viz., North London, Enchantress, Prince of Wales and Duke of Bedford; these were planted in a row about two feet apart, and were suffered to bloom and ripen their seed all summer. Last spring many hundreds of young plants came up from the seeds scattered the summer before; of these I selected the finest and most promising, and transplanted them into a bed of good rich garden mould in hopes of obtaining one or two fine specimens by this process of natural hybridization, and my hopes in this respect have been more than realized. I have now ten new varieties, much finer than any I have erev before seen. Imagine a bed of fine healthy plants some of them already forming masses two feet across, and covered with flowers two and a half inches in diameter; some pure white; others with the most delicate tints of rose, lilac, purple and crimson; and these again edged and veined with colors still deeper and richer; and as beautiful in form as in color, some being in the form of a large bell, others like an elegantly folded turban; altogether making a display of beauty and variety such as is seldom seen in any collection.

Many of the smaller varieties are also very beautiful, being of various shades of rose and lilac, and richly veined with carmine, lake or purple. One in particular is of a pale lilac, veined with dark indigo, almost black. I need not speak of the exquisite enjoyment derived from watching the development of these beautifnl flowers. Let your readers try the experiment. N. Stone. *Oswego, July 20th,* 1854.



TROPEOLUM LOBBIANUM.

The above figure is a representation of a new climbing *Nasturtium*, (*Tropeolum Lobbianum*,) a South American plant. It bears brilliant orange-scarlet flowers, which continue to appear in succession. It succeeds best where one-year plants are set out in open border early in summer.

Mildew on Grapes.

Messrs. Editors—Can you inform me why grape vines trained on the ground, are less liable to mildew than those trained on elevated frames? Is it the nitre gathering under them, (as under all buildings,) or is it something else? An answer is respectfully solicited as it may assist me in experiments I am now trying. L. O. Cross. *Sandy Hill, Washington Co. N. Y., July* 15, 1854.

The fact, above stated, is well known to the cultivators of the foreign grape in open air, but they are divided in opinion as to the cause—some ascribing it to the soil dashed by up rains, others to the mixture of the earth, others again to reflection, &c. A few varied and repeated experiments, numerous enough to escape accidentals, would doubtless settle the point.

White Raspberry.

Does the white smooth-caned raspberry need covering in winter? C. N. B.

If by the "smooth-cane," our correspondent means the raspberry known sometimes as the *White American*,—a yellow raspberry resembling the American Black, except in color, we can state that we have always found it perfectly hardy.

PROTECTING VINES FROM BUGS.

Messrs. Editors—Seeing an inquiry in your periodical, how to keep bugs from vines, I will give my experience.

First, I wait in spring until the ground is warm enough to promote vegetation, before planting, that there may be no stinting, taking good care to have several broods of chickens out in season to attend to the plants as soon as they appear above ground. They are placed in the vine-yard with a hen to brood and call them in at night; and thus I make my bugs and worms a source of profit, and very conveniently as you would have been constrained to acknowledge if you had breakfasted with me on a broiled chicken taken from 150 I have on hand. This may come too late for this season's practice, but it is worth remembering till another year. A. Walker. *Oswego, N, Y.*

STRIKING CUTTINGS.

The following are half a dozen general rules relative to the selection and preparation of slips or cuttings. 1st. Let all slips be cut off as near a joint as possible without injuring it. 2d. For autumn or winter make choice of well ripened firm wood. 3d. In spring or summer half ripened young shoots are best, as they strike quicker than old wood. 4th. All succulents, such as Cactuses, Geraniums, &c., should remain a few days to dry, until their wounds are closed up, before they are potted. 5th. Never allow cuttings to remain in water; if they cannot be planted immediately lay the ends in moist sand. 6th. In winter or summer always let a few of the leaves remain on evergreens. *Gard's Chronicle.*

Gooseberry Mildew.

When many remedies are proposed for an evil, it usually happens that the remedies are incomplete, and the evil serious and hard to remove. It is however desirable to obtain all the information at hand in such cases, and with this view, we copy the remedy for gooseberry mildew given in the American Agriculturist, adopted by R. T. Haines, a skilful cultivator residing at Elizabethtown, N. J.

The favorite variety we found cultivated here, is Woodward's Whitesmith; and we never saw bushes more loaded with fruit, even in old England. It was also plump and fair, and quite free from the mildew. Mr. Haines' remedy for this, is to remove the earth from around the roots, thickly mulch with salt meadow hay, and then cover it with the earth. He has tried many other methods of keeping off the mildew, but this is the only one which has been generally successful.

Sowing Grass at Midsummer.

Messrs. Eds.—Can you inform me whether, after the grass is off the ground, by sowing timothy or clover seed soon after, the grass will be matured so as to be fit to cut next summer? In other words, can I cut the grass and make into hay next July, by putting in the seed this or next month? By giving information you will oblige. Peter Wilson. *Versailles, N. Y.*

The great difficulty in sowing grass seed at the time named, is the uncertainty as to dry or moist weather. Clover and timothy, sowed late in summer, and *harrowed* in, will do well, provided the weather at that time, and through autumn, happens to prove unusually and uniformly moist. If dry, the labor and seed will be lost. We have sown and harrowed in timothy, during the early part of moist autumns, and had a fine growth of meadow grass from it the next season, but not equal to second-year crops. We would not recommend the trial with clover, but think there is a reasonable prospect of success with timothy. Sown early in spring, on rich ground, and with triple the usual amount of both kinds of seed, we have obtained the same season a crop of grass as large as many farmers do the second year with ordinary sowing.

More about the Wheat Insect.

The wheat crop in the north part of our state (Ohio) is effectually used up by an insect called the weevil, but I should think that it must be some other destroying insect from the manner it attacks the wheat. It commences as soon as the head begins to form, and destroy it by sucking up the juices, and not by eating the kernel. There is a lamentable ignorance existing among farmers in regard to the habits of the various flies, worms and insects they have to contend with in raising both wheat and corn, and which I for one would be very glad to remedy if I knew where to get a work of reliability on Entomology, and if you know of such a treatise you would confer a great favor on me and perhaps many others by recommending it in the Gentleman, with the address of seller, price, &c. Joseph S. Russell. *Lyme, O.*

Plan of Farm Buildings for Animals.

In no department of rural architecture are we more deficient than in plans of farm buildings. If a well arranged dwelling, to secure comfort, convenience, and a saving of unnecessary steps, is a matter of high importance to the female members of the farmer's family,—equally important is a proper arrangement of the farmery to avoid a waste of labor, space, food and manure, in the necessary attendance upon domestic animals, and to secure their cleanliness and comfort in the best manner. We have seen nothing for a long time, in relation to this subject, that pleases us so well as the plan of the newly erected and extensive stables of Charles B. Calvert, president of the Maryland Agricultural Society, as published in a late number of the American Farmer. Although the extent of these is far beyond the usual wants of farmers, yet the plan possesses the advantage of admitting reduction in size, without altering its essential features, according to the requirements of more limited stock raisers and cultivators. In small establishments, the outer range of stalls may be entirely omitted.

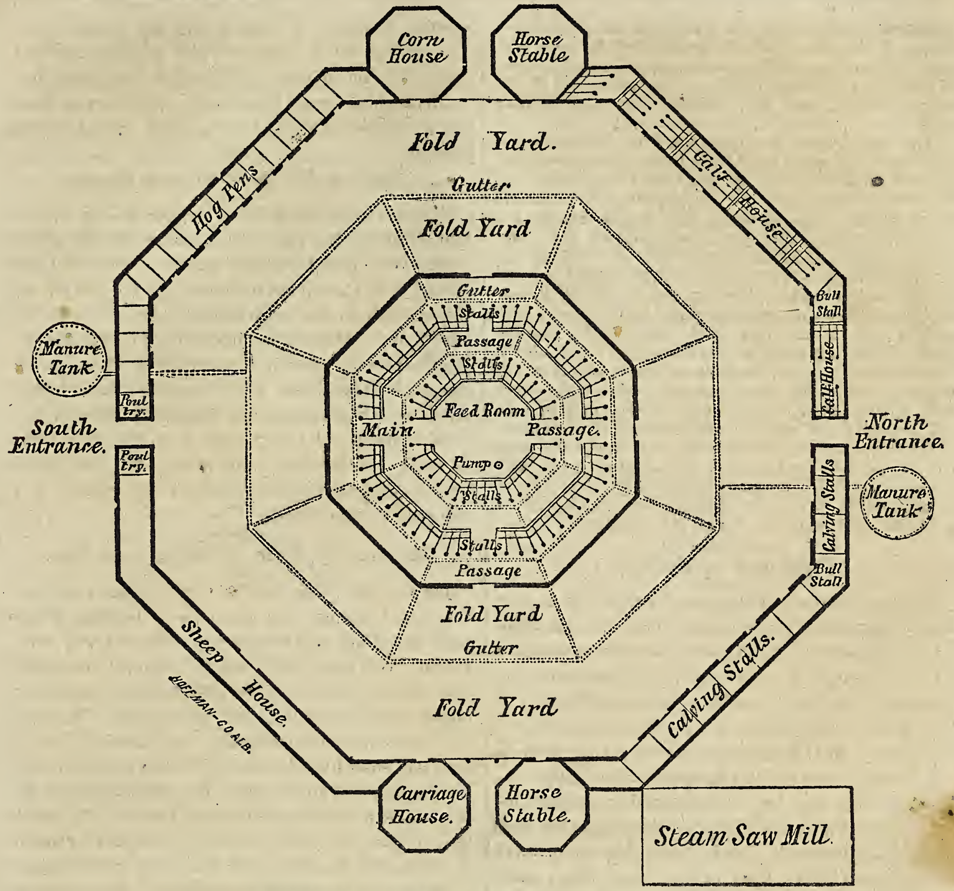
The following description is in the proprietor's own words, and shows much experience and sound judgment in relation to keeping stock and saving manure; the remarks, especially, on the subject of *manure-cellars*, and on the formation of compost heaps *on the spot where they are needed for application*, are well worthy of notice, and accord with our own observation and experience, and with the remarks we have already made in this journal.

Gentlemen:—As you have been appointed by the Maryland State Agricultural Society to examine and report upon the Essays and Plans which may be submitted for the premium offered by said society, "for the best Essay on the most approved plan of Farm Buildings," I venture to offer for your consideration the plan and description of some lately erected for my own use.

The nature of such buildings will depend greatly upon the system of cultivation on the farm, and I therefore beg leave to say, that these are intended for a dairy, stock, grass and grain farm. Having a very large dairy of cows, I have appropriated the main building for the accommodation of one hundred and four cows, and a large feed room on the lower floor, and the upper story for hay, grain, straw, &c. In order to explain more fully the whole arrangement of the buildings, and their connection with each other, I refer you to the draughts which accompany this communication. By examining these draughts you will observe a large fold yard, sixty feet wide, separating the main building from the others, and I think this will be found very convenient, as all of the buildings open into it and form themselves the whole enclosure. The buildings on the outside of this yard, are a corn house, carriage house, two horse stables, calf house, poultry houses, sheep house, hog pens, stalls for cows having calves, bull stalls, &c. Through the centre of the yard you will find a gutter, which is intended to convey the water and liquid manure from the premises into two large tanks on the outside of the outer range of buildings. This drain receives all the water and liquid manure from the main building, by gutters passing out at each of the eight corners of the same.

The main building is an octagon, one hundred feet in diameter, and two stories high, with a glass dome twenty feet in diameter, on the top for ventilation and light. The lower story having a large entrance door, and two windows on each of the eight sides, is devoted to two ranges of cow stalls, with passages behind each eight feet wide, and a large feed room 36 feet in diameter in the center. In order to form the stalls for the cattle, a sill is placed two feet from the outer side of the feed room, and the space between this sill and the feed room, makes a trough of that width, which opens into the feed room, so that the inner range of cows are fed without leaving the room. The cows are confined in stanchions fastened in this sill and a plate above, which I consider far better than any other mode on account of economy, security and cleanliness. It is more economical because it is easily made by placing two uprights, one and a half inches thick and 4 or 5 inches wide, into mortices made in the sill 6 inches apart; one of the uprights is made fast in the sill and also in the plate, and the other is confined in a mortice in the sill, but is made to play back and forth in the plate in order to let the cow's head in and out. On the top of the stationary upright, above the plate, is fastened a piece of board, working on a pivot, with a mortice cut into it to fit the top of the moveable standard, or upright, and after the cow has put her head in between the two, the top of the moveable upright is pushed towards the stationary one until it comes under the mortice in the board above, which then falls over the upright and confines the animal securely. It is also more economical, because there is no necessity for stalls, and the same space will accommodate more animals by this mode of fastening than any other. It is more secure, because it is almost impossible for an animal to get loose after she is once fastened, and there is no danger of injury from getting entangled in the stall. It is more cleanly, because the cows always stand a certain distance from the stanchions, and throw their voidings into the gutter below.

Six feet from the sill into which the stanchions are fixed, and on the outside of the same, is placed another sill, fastened to short posts, put in the ground, and the space between these two sills is the platform, on which the cows stand. This platform is raised some 5 or 6 inches above the passage, behind the same, so that the cows when they lie down, cannot lie in the manure which falls in the passage. The platform is formed entirely of clay, except about one foot in width, where the cows' hind feet stand, which is paved with brick to pass off freely the urine, &c., and it should have a little inclination outwards. The passage behind the cows is eight feet wide, which enables a cart to pass around to take away the manure, litter the cattle, and also feed the second range of cows, as their troughs open into the passage of the first row. This passage is paved with brick, and has an inclination towards the platform, next to which a shallow gutter is formed, which conveys the liquid manure to the drains, which run out of the building at each of the eight corners. The outer range for cattle is made precisely after the plan of the inner one. From the inside of the feed room, you pass up a stairway into the second story, which is of the same dimensions, except the 20 feet in the center under the dome, which is left open for light and ventilation. On the second story immediately over this opening, I propose to erect a stationary horse power of thirty feet diameter, which will not obstruct the light or ventilation, except to a very small extent, and by means of a line of shafting running through the building, all the grain may be threshed, cleaned and ground, the hay cut or packed, the corn stalks cut and ground, the corn shelled, roots cut up, and anything else done that requires horse power. Such a power is far preferable to the ordinary moveable ones, which require much more power to put in motion, and then will not do near the work, besides the many difficulties in keeping them in repair. The advantages of this barn are that, from its shape and arrangements, more animals can be attended to by the same amount of labor than in one differently constructed. Its construction admits of better ventilation, draining, and light-



Ground Plan of Mr. Calvert's Farm Buildings.

ing, than any other, and that the same amount of accommodation cannot be obtained for the same amount of cost from any other shape. All the liquid manure passes immediately into the tanks, which are sufficiently removed from the buildings to prevent any injurious effects upon the animals. While on this part of the subject I cannot refrain from expressing my abhorrence of the plan which I have seen highly recommended in certain *high* quarters, of having cellars under barns to receive all the manure, and at the same time converting these cellars into hog pens, thereby forcing one of our most valuable animals not only to lie and live in his own filth, but actually to live upon the filth of other animals, and I have often thought that those who recommend such an abominable practice, might be taught better by being for a short time themselves subjected to a similar process.

One of the great errors in buildings for animals as well as man, has been the want of proper ventilation, and there is no doubt that many of the diseases, to which they are subject, have been principally owing to this cause, and it is most strange that, in this improving age, any one should recommend such a filthy practice, as the one of having all the manure placed immediately under the animals.

In regard to the proper saving of manure, I believe that the system at present coming into use in England, of throwing it all in large tanks or vats, and diluting it with water, and then forcing it over the farm through pipes, to be the best and most economical as a permanent system, because the expenses of pipes, pumps, &c., will in a few years be exceeded by the daily, monthly, and yearly expenses of hauling it upon the land by carts. I contend that at the present price of guano, and its great effect on our lands, we cannot afford to haul stable manure more than half a mile, because the mere cost of hauling is as great as the cost of an amount of guano, which will produce an equal if not superior effect, and it is therefore necessary to use the stable manure near the place of manufacture. If however it is determined to form compost heaps, by mixing the stable manure with earth and other substances, I would advise that it be hauled from the stable every day to the field where the compost is to be applied, and the heaps formed there, as by this method great economy of time and labor is effected. It will be perceived, by an examination of the draught of the ground plan of these buildings, that they are all very conveniently arranged with regard to one another, and the same buildings may be used for different purposes according to the wants of the farm. The buildings on the outer range, can have, if it be necessary, a yard very conveniently attached to each. The superintenent's house is located about one hundred feet from the main entrance, and therefore the whole establishment comes immediately under his observation.

Since the commencement of this Essay, I have erected a building sixty by twenty-six feet, on the outside of the fold yard, and running partly along the east line of the same, which is intended for a steam saw, grist and plaster mill; and a machine and carpenter's shop. Twenty-four feet of the building is three stories high and the residue two stories. The lower story is cut into the side of a hill, and is co-occupied by the engine, boiler, cross cut, circular saw, and planing mill.

The second story is appropriated to the saw mill, grist mill, and other machinery to be driven by steam, and the third story will be occupied as a machine and carpenter's shop. A row of shafting will extend through the whole building, with drums or pulleys of various sizes to suit the speed necessary for the different machines, and a shaft will also be extended into the large cow house, and barn, to drive threshing machines, root, corn-stalk, straw and hay cutters, and by this means save the necessity of the horse power I propose to erect in the centre of the barn. The exhaust pipe of the engine will pass through a large steam chest, where food may be steamed for stock. A steam engine of sufficient power threshes grain much better than a horse power, because regular speed may be kept up, regardless of slight obstructions; but with horse power, if the straw gets tangled or any slight obstruction passes into the thresher, the impetus of the machine is diminished, and consequently more or less grain is left in the straw until the machine again regains its regular speed. Chas. B. Calvert.

Scratches in Horses.

Messrs Editors—I beg leave to send you another remedy for scratches in horses. I apply a plaster of All-healing Ointment. This ointment is composed of 8 parts by weight of oxygen, and 1 of hydrogen. But you need n't take the trouble to compound it, for our kind Creator has provided it at our hands in unlimited abundance. It is deeply to be regretted that its healing properties are so little known. It is a better application than man has ever invented or ever will invent for healing human as well as brute maladies both internal and external. But it is so simple and natural that men can't have faith in it. Every thing must have some *art* and *mystery* about it to obtain favor. Try this All-healing Ointment, gentlemen. It is cheap and easily applied. I have tried it and it works like a charm. C. N. B.

The free use of our correspondent's prescription [*water* we suppose] will at least promote cleanliness in men and animals, while doctors disagree as to its further effect in the removal of disease.

Staggers in Horses.

Sometimes horses are taken with stiffness in their limbs to such an extent as to cause them to sway and stagger about just like a drunken man. They do not seem to suffer any pain; they do not groan nor breathe quick; their ears and legs are neither cold nor hot, and neither dung nor urine show anything wrong. This disease is ascribed to a sympathetic derangement of the brain, depending on disorder of the stomach, occasioned by feeding for some time on indigestible food, such as rape, rye-grass, or ripe grass seed of any kind. The disease is almost entirely confined to the time of year when ripe grasses are most freely eaten. Several horses on one farm, have been affected at once. It comes on, sometimes gradually and sometimes suddenly. The treatment consists in giving a dose of opening medicine, feeding on bran for several days, and giving tonics. The old diet must be carefully avoided, as no cure can be affected so long as the food is given which caused the disease. Some horses have got completely well by turning them into a bare old pasture.

Gas-tar for Wounds and Sores.

A writer in the Mark Lane Express of July 3, says that all having the care of sheep, will find the above article very useful for sore heads, or cuts with the shears, or any raw place whatever. It may be put on with a brush in the same way as paint. It may be rubbed over two or three times, so as to have a coating thick enough to exclude air and flies. Underneath this artificial scab, the wound usually heals rapidly. Mr. Mixon, who recommends gas-tar for wounds and sores in Sheep, (why not also in sores on horses, cattle &c.?) says that it is better than pitch, tar, black brimstone, or anything that he had ever tried. It is also useful to mark with.

Degeneracy from Breeding in-and-in.

The fact that animals of all kinds become degenerate from breeding from two parents between which there is affinity of blood, is one that is pretty well known. It is not always however attended to in practice, else we would not have witnessed the degenerate lambs which we have seen this spring. Through thoughtlessness or carelessness a neighboring flock of ewes was sired by the same buck which had been with them before for two seasons. He sired, therefore, his own lambs, and perhaps, his lambs' lambs. The owner knew better and intended to have procured a change of bucks; but in some way the result above stated happened. The result was a number of very weakly and deformed and idiot-looking lambs. Some were so weak in the hind legs that they could not support their own weight; and some had their hind legs twist outwards when they attempted to walk. One lived several days, but breathed quick and short all the time, and had to be assisted about nursing. One was coarse wooled almost as a water-dog, and looked very stupid and idiotic. Such results seem worthy of being put on record as a warning against like carelessness or neglect in others.

Lice on Cattle or Horses.

Messrs. Editors—I have tried snuff, and snuff and lard melted together, leached ashes, fine sand, &c. but I think the most effectual remedy is to take one pound of tobacco, (injured or refuse stems will do,) to three grown animals, and cover the tobacco with water, and let it stand forty-eight hours in a warm room in winter, or in the sunshine in summer; then wet the animal thoroughly; then again in five or six days, and the vermin will be scarce.

Horses often learn to be unruly by rubbing the fences down while lousy.

It has been said that tobacco will sicken an animal, but I have not seen any injurious effects from its use; if it did sicken a little, it would still be better to kill the lice.

Perhaps the reason why tobacco juice is more effectual than some of the other articles mentioned, is that it can be more thoroughly applied to every part, and no vermin can escape. W. *Oswego.*

Mechanical Conveyance of Manures.

Manure is as necessary to successful farming as the engine to a steamship, or as fuel to a locomotive; and the amount of discussion on the economy of saving the materials and manufacture of manures, shows that their importance is well understood by intelligent cultivators. There is one part of their management and application, however, that seems in a great measure to have been overlooked, or at least underrated, and this is the saving of *mechanical labor* in its conveyance, while preparing and applying it.

Drawing manure is one of the heaviest and most costly of farm operations. The farmer who draws twenty loads of wheat, or thirty tons of hay, laborious as this may seem, performs but a small task in comparison with what he should yearly accomplish in the conveyance of manure; for every farm of one hundred acres will yield at least two hundred loads of the best manure if properly managed, and some may be made to double nearly this amount. Hence it is no wonder that we often see huge piles of this life-element of farming, wasting in barn-yards through the summer unapplied.

But the farmer who makes manure in the ordinary imperfect manner, that is, by merely casting out into his yard the cleanings of stables mixed with the litter, added to the droppings of the cattle running at large, obtains but a small quantity in comparison with the skilful manager, who saves every thing by a large admixture of absorbents. If then, the more scanty heap occasions too great a labor to draw out and apply, how important it becomes that the most careful management be devised, to economise as much as possible the cost of handling and carting the increased accumulations of the most improved process.

On small farms, where the fields to which the manure is applied lie quite near the barn-yard, it may do to manufacture the compost heap in the stable-yard. But in most cases this will be a most expensive practice. The largest amount and the best manure must be made by not only collecting all the solid droppings mixed with the straw or litter, with the liquid portions saved and added, but a large portion of peat, turf, loam, and other similar absorbents of a more solid character should enter largely into its composition. Now, to cart a hundred loads of turf into the barn-yard from a remote part of the farm, and then to draw all this heavy bulk back again into the fields, is causing a vast amount of labor. Again,—the shovelling over and mixing of the compost heap, which is practiced with so much advantage by Europeans, cannot be thought of for a moment by our farmers who pay the present high wages. The intermixture resulting from drawing and spreading the heap, may generally be sufficient, but a more thorough execution of this work would be better.

The question therefore occurs, How may this labor of conveyance be reduced as much as posiible?

We have found a most important means of saving labor, by forming the compost heap in the field where the manure will be required. Loam and turf are absolutely essential for the absorption and retention of the ammonia. Large quantities of turf may be obtained from fence corners, where otherwise it would be of little or no use; but on large farms, the more mucky portions of pastures may be obtained at less labor, by first plowing the sod. Let the manure from the yard, as it accumulates, be drawn out and spread a few inches in thickness, in a long and narrow strip, say from a few feet to a rod in width according to its quantity, and then be covered with a layer of turf (or loam) at least equally thick. A second layer of manure is applied and a second layer of turf until gradually during the season, a height of some two feet has been attained. If the successive alternating layers have been thin, a great deal of subsequent intermixing will not be necessary, and this may be easily and cheaply accomplished by the use of a large plow attached to a yoke of oxen, beginning at the sides of the heap and plowing down successive slices of the mixture, using the harrow between each plowing, until a most thorough pulverization is accomplished. This may now be drawn off and spread from the cart or wagon in an even and perfect manner, being entirely free from lumps. Such a material as this is admirably fitted for preparing wheat land.

A western farmer keeps his yard perfectly clear of stable accumulations by drawing out every morning a wagon load when the team goes out to plow or to other work. This practice is pursued more particularly during the times of spring and fall plowing. In summer but little accumulates; and in winter there is little difficulty in keeping the coast clear. During the sharp frosts of winter, however, a difficulty exists in consequence of the earth being frozen and incapable of being applied in successive layers. Those who are so fortunate as to possess a drained muck or peat swamp, may draw from it without hindrance any time of the year; but others may secure a supply of turf by the plan lately mentioned in the Country Gentleman, namely, plowing up a turfy or mucky pasture early in autumn, and piling the sods when dry like cords of wood, under a large coarse shed made for the purpose. These will become so free from moisture as to be easily used any time during winter. But in the absence of either of these provisions, an imperfect substitute may be found in spreading a layer of old straw, chip dirt, &c., upon the manure.

This mode of forming the heap in the field possesses two especial advantages. The stable yard is at all times kept clear of those accumulations, which are never any ornament to the establishment, and which in wet and muddy weather are a serious inconvenience; and the manure being nearly accessible to the land requiring its application, it is drawn on and spread without that large consumption of time usually required at the exceedingly busy season of preparing for crops.

One of the largest and best farmers in the country, whose stables are arranged in an octagon, with the animals' heads towards the feeding room in the centre, saves a vast amount of labor by a covered cart way running round the whole, by means of which the stable cleanings are shovelled immediately into the passing cart, and drawn at once to the field without a single transfer or reloading; and it would prove of great advantage in all cases could the same provision be made for carting off the accumulations of stables without the labor of wheeling them first out into the yard, except in those instances already named where the fields are closely contiguous, and the materials for compost are as easily accessible here as at other parts of the farm.

We are by no means confident that we have pointed out the best mode for accomplishing the great saving needed in this laborious farm-process, but if we have afforded suggestions for further improvements, an important end will be attained.

Agriculture of the Sandwich Islands.

We give the following extract of a letter from a subscriber, dated East Maui, May 25, 1854:

The growing of wheat has been entered into with consideraale spirit this year, in this immediate vicinity, and the crop bids fair to be a fine one. Harvesting has already commenced, and what is peculiar to *this country*, I think, will continue for nearly three months, the climate admiting of sowing wheat from the first of December to the last of March. The crop will amount this year to about 25,000 bushels; and from the fact that there is a flour mill at Honolulu ready for operation; the present and prospective high price of flour, and the success of this year's crops, the next season's sowing will be quadruple that of this.

The soil and climate seem admirably adapted to the growing of wheat. There is now good wheat growing on land, where five or six crops have been raised in succession without any dressing. A fine growth on land that produced last year from 25 to 30 bushels per acre, and this land had been cropped with sugar cane for ten years. On new land I have seen this year wheat 6½ feet high, and whole fields averaging more than five feet.

The elevation at which wheat is grown is from 1500 to 3000 feet above the level of the sea. The soil is decomposed lava in some parts, and in others the lava is mingled with volcanic cinders and ashes, also some vegetable matter. The temperature varies from 50° to 84° Farh.

It is believed that after the present harvest the Islands will not import much bread-stuff.

The labor saving machines of the U. States are being introduced here. One of Hussey's Reapers is here for the present harvest, and another on the way. A one-horse-power overshot Thresher of Emery's manufacture, a two-horse-power Thresher of Whitman's make are here, and another of Whitman's on the way.

"The Cultivator" gives much satisfaction to those who take it. The information it gives in relation to agricultural implements is important to those of us, who, though we live in these ends of the earth, are interested in agriculture, and consequently anxious to hear of the most improved implements of husbandry, and the best manner of cultivating the soil.

Can you inform me through the Cultivator whether any grain sower, for sowing broadcast is in use to any extent in the U. States, and if so whose patent, and where such an implement can be had? John S. Gower.

C. H. Seymour, East-Bloomfield, N. Y., manufactures a broadcast sowing machine, which has been pretty extensively used, and has, so far as we know, given satisfaction. It can be used for all kinds of seeds—also for lime, plaster, poudrette, guano, &c.—Eds.

Book Farming—Indian Corn.

Messrs Editors—I noticed a communication in No. 2, Vol. 4, *Country Gentleman*, from B. B., on "Book Farming—Indian Corn," in which he complains, and seems to cast censure on the editor of the Cultivator, and some one else who had written on the subject of tilling and curing Indian corn, for recommending a course, which in his case resulted in a heavy loss. The writer says—"had I been governed by my own common sense view of the matter, I would have rejected the author's reasoning, and let my corn alone. Common sense says that grain will not perfect itself if cut before fully ripe." Now I would not set myself up against one so well versed in such matters, and especially after having been taught the lesson of which he speaks, but would say I dissent from some of the conclusions to which the writer of said article has arrived. First, that grain will not perfect itself, if cut before fully ripe—I say grain, because I wish to speak of other grain as well as Indian corn. My experience has taught me that barley will weigh more if cut before fully ripe, than if left to stand till dead ripe. I once commenced cutting a piece of barley while some of the kernels were quite soft, and was obliged to leave a part for two or three days, and when harvested it did not weigh as much by three lbs. to the bushel, and besides the color was so changed as to hurt it for malting. It used to be the custom to always cut our barley before fully ripe if we wished good weight and color.

I know that in respect to cutting up corn, there is some difference of opinion; but the experience of more than twenty years has confirmed me in the opinion that, taking all things into consideration, it is best to cut corn before thoroughly ripe. Once I had a piece of corn in just the state which he says his was,—stalks perfectly green, and the corn fairly glazed, and the day was such as to predict a severe frost at night; and thinking I might as well lose some of the corn as all the fodder, I went with what help I could get, and cut the piece that day, and the result was that I never had sounder or brighter corn in my life. As the season will soon be along for cutting and curing corn, I will give my method of procedure, which may serve to guide some one in a course which has always done well in my case.

When the corn has so far ripened as to have the husk turn a little yellow and begin to loosen from the ear, and while the stalk and leaves are yet green, I cut and stack five rows in a row of stacks. Tie two hills together on the third row, and make good sized stacks, for they are less likely to get down; wind well with three bands, and it will stand till winter without taking hurt and the stalks will make excellent fodder; besides it cleans the ground well for the next crop.

One reason for writing this article is, to give the experience of one who is looking for light, and wants the experience of others in every thing that pertains to the science of agriculture. And to the agricultural press I would say, give us light. L. A. Brown. *West Haven Ct.*

Lime as a Fertilizer.

No soil possesses fertility in a high degree unless it contains lime in a very considerable proportion. Excess can be no otherwise than hurtful, else there would be no occasion to name it excess; and so too of deficiency. But these can hardly ever be determined by chemical analysis, but only by trial, as the quantity of lime which can be usefully applied depends on what other constituents are present in the soil.

Lime in an uncompounded state, seems to be less used now than formerly. It seems questionable, however, whether or not recourse to a dressing of lime occasionally would not prove advantageous. The amount of lime annually removed from the soil by a course of cropping must be restored in some way or another. When all the grain, straw, hay and roots, grown on a field, are removed away from it, there must be quite an amount of lime less in the soil than before. On clay soils, upon the texture of which lime produces a specially favorable effect, this diminution of the amount of lime cannot be restored, probably, in any better or *cheaper* way than by the simple article itself, rather than by sulphate or phosphate or super-phosphate, or any other compound of lime. Neither wheat, nor barley, nor oats, nor clover, can be raised in perfection without a suitable supply of lime in the soil. It is needed to give strength to the straw, to prevent lodging, and to make the berry perfect. It is essential to the healthy growth of clover, as also of potatoes, turnips, and perhaps other roots.

The sulphate of lime or gypsum, which has been so extensively found useful as a fertilizer, usually contains in a hundred parts, forty-six parts of sulphuric acid, thirty-three parts of lime, and twenty-two parts of water. This compound of lime, before it becomes soluble, requires about five hundred parts of water to be added. It cannot very soon be useful, therefore, in a state of solution. And as to its power of fixing ammonia, there are doubts uttered of late, and a wide difference of opinion exists. From the results which have been reported of the application of sulphuric acid mixed with water, as a manure or fertilizer, we are inclined to think that a good share of the beneficial effects of gypsum is to be attributed to the evolution and action of the acid upon the constituents of the soil which afford nutriment to the crop to which the gypsum is applied, or to the succeeding one.

And if rightly informed as to the composition of another professed compound of lime, a celebrated superphosphate, we would ascribe a large amount of its good effects, when it has any, to the sulphuric acid which enters into its composition. A considerable share of the good effects of this highly puffed article, is also owing, probably, to the carbonaceous matter which it contains. For charcoal or carbon is useful on almost all soils. And this superphosphate is said to contain a large amount of charcoal and sulphuric acid, and a small amount of guano. *

Coal-Tar on Lime Mortar.

Messrs. Eds.—Will you inform me through *The Cultivator*, how coal tar, spread on lime plaster of an inch in thickness, instead of on cloth or strong paper, will answer for flat roofs? We use no sand, but a large proportion of clay to the lime in our plaster, which renders it cheap, and as it will not warp nor shrink, I do not see why it would not make a good roofing. If used, should the plaster be dried before applying the coal tar, and what quantity of tar per hundred feet, would it require. If you, or any of your correspondents, can inform us whether this has ever been tried, or what objections you have to it, you will much oblige by informing us.

Please also inform me whether lime that will bear 5 or 6 times its quantity of sand, for plaster, will be *proportionably* superior as a fertilizer, to lime that will bear but once its quantity. A Subscriber. *Ryegate, Vt.*

We are not aware that the experiment has received a full trial—perhaps some of our correspondents may inform us. If the coal-tar will shut out completely all moisture, the coating may stand—provided also expansion and contraction of the boards do not cause cracking. If, however, moisture enters the composition, the first winter will split it to fragments.

A little impurity in lime may unfit it for the best cement; but not injure it, but even possibly benefit it as manure, if this impurity happen to be a fertilizing substance. Hence lime for building and for enriching the soil, are not, *of necessity*, correspondingly valuable.

Twin Calves—White Carrots.

Messrs. Editors—I wish to ask a few questions through the columns of the Coun. Gent. Is it true that twin heifers will not produce young?

Will the white carrot produce abortion in cows? I find both of these opinions prevail here to some extent. C. N. B.

The opinion that twin-heifers will not produce young, probably originated from the fact that "*free-martins*" (heifers born as twins with a bull calf,) are often defective in organization, as Hunter proved by dissection, and consequently will not bear,—although frequently no such defect exists. But we have never heard that when both the twins are heifers, any difficulty whatever has been found.

We do not believe the white carrot will produce abortion—unless by injudicious feeding—as we never knew any difficulty of this kind, after considerable experience with it.

Horticultural Department.

Summer Pears.

To the list of summer pears figured and described a few weeks since, we add the following:

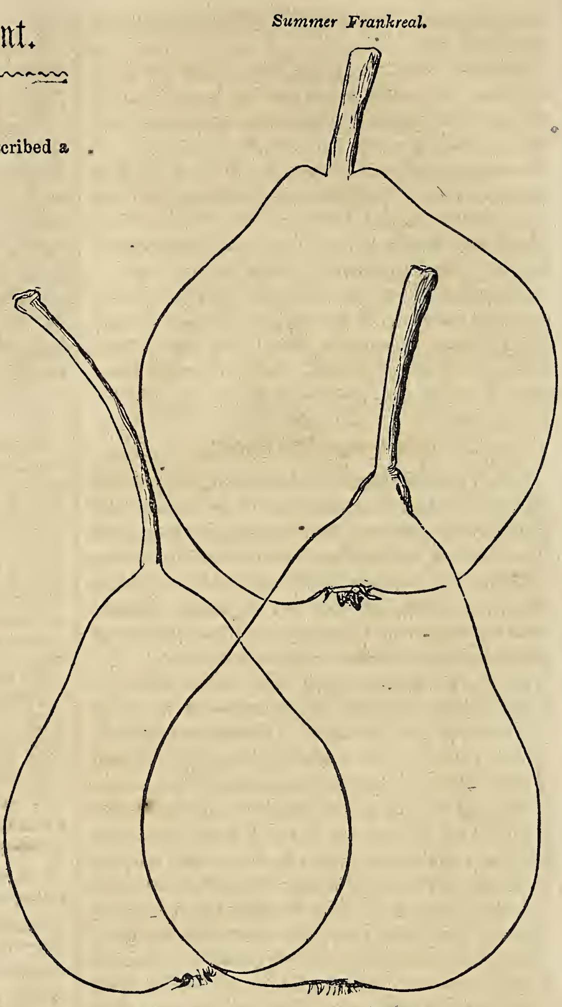
Rostiezer.—This late summer pear, on account of its exceedingly rich and perfumed flavor, in connexion with its small size, bears the same relation to summer pears that the Seckel does to autumn varieties. Unlike the Seckel, however, it is a free flower, and usually succeeds well on the quince. The Rostiezer is rather small in size, obovate-pyriform, regular; the skin is dull brownish green, with a dark, dull, reddish brown cheek when exposed to the sun, with some traces of thin russit; stalk long and slendor; flesh juicy, melting, sweet, with a high, excellent, perfumed flavor. The young shoots become dark purple. A European variety, not extensively known.

Tyson.—For a combination of high flavor, melting texture, good size, and the free growth of the tree there is no summer pear that exceeds or evene quals the Tyson The young trees are long in coming into bearing, which is its only drawback. It grows vigorously, however, on the quince, and the dwarf trees bear sooner. In size it is full medium, being about as large as the Virgalieu; it is obovate-pyriform, or nearly obconic; the skin is bright yellow, with a reddish brown, softly shaded cheek, and often some russet; the stalk is rather large, inserted in a small fleshy prominence which is abruptly contracted from the rounded neck; the flesh is of fine texture, buttery, very melting, juicy, with a sweet aromatic, slightly perfumed, excellent flavor. The shoots are erect, dark reddish brown, with a vigorous growth. An American variety, ripening late in summer.

Summer Frankreal.—This is an older sort, and although not standing so high in character as the two preceding, still possesses several valuable qualities. It is one of the best varieties for successful culture on the quince, and indeed it should be grown on no other stock, as this gives decidedly the best flavor to the fruit. Its size is medium; form short-obovate, with a slight obtuse neck, the body tapering a little to the eye; skin pale yellowish green, sometimes with a faint blush; calyx closed, basin furrowed; flesh white, fine grained, buttery, melting, rich and "very good," or nearly first-rate in quality. It ripens late in summer. The shoots and leaves have an unusually downy appearance.

☞ The Cumberland Co. (N. J.,) Ag. Society will hold their first fair in Bridgeton on the 28th September.

Summer Frankreal.



Rostiezer. *Tyson.*

California Lettuce.—Either their lettuce or their stories are very large in California. S. W. Seger states in the *California Farmer* that he has raised a head of lettuce, of the early head variety, as closely packas a drumhead cabbage, *two feet in diameter.*

Destroying Green Aphis.—B. Snyder, of Rhinebeck, N.Y. informs the Am. Agriculturist, that he has very successfully destroyed the green aphis on his young apple trees, by dipping the affected branches in a vessel containing strong soap-suds, in which the young shoots of the Ailanthus have been bruised, so as to make an infusion. He considers the Ailanthus the chief agent, from its well-known offensive oder. We have been equally successful with the soap-suds without the Ailanthus, and the probability is that the latter is of no essential use. It is not nearly so offensive and poisonous as tobacco, no *infusion* of which has any effect, the strongest *decoction* being necessary to affect the aphides

Stump Machines.

The following account of some of the simpler machines for the extraction of stumps from fields, occurs in Thomas' new treatise on the principles of Farm Implements, under the head of the application of the *lever* to practical purposes :—

A simple contrivance for allowing a succession of efforts in the use of the lever is represented in the accompanying figure (*Fig.* 1), and is used for tearing out the roots of partly decayed stumps. It may be also applied to lifting heavy weights, and to various other purposes. Two pieces of strong, three inch white-oak plank, eight inches wide and seven feet long, are connected at the ends, and are furnished with the movable leg, *d*. Two rows of holes are bored through them, to receive iron pins, which are to serve as fulcrums. A strong lever, *a*, is furnished at one end with a thick iron hook (shown in *Fig.* 2,) which is first fastened on the root of the stump, and then one of the pins is inserted under the lever. The lever is now elevated, and the other bolt is placed under it. It is next pressed down, and the first bolt elevated one hole higher, and so on till the stump is torn out. To prevent the lever slipping, a notch is made on its under side, on each side of the hook, as shown in *Fig.* 2.

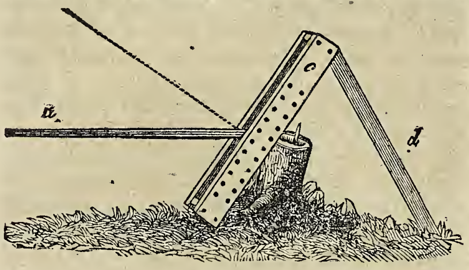


Fig. 1.

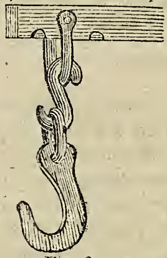


Fig. 2.

A more powerful stump-extracting machine, made on precisely the same principle, is exhibited by *Figure* 3. The lever, *a*, should be a strong stick of timber, furnished with three massive iron hooks, secured by bolts passing through, as represented in the figure. Small or truck wheels are placed at each end of the lever, merely for the purpose of moving it easily over the ground. The stump *b*. used as a fulcrum, has the chain passing round near its base, while another chain passes over the top of the stump, *c*, to be torn out. A horse is attached to the lever at *d*, and moving to *e*, draws the other end of the lever backward, and loosens the stump; while in this position another chain is made to connect *g* to *h*, and the horse is turned about, and draws the lever backward to *i*, which still further increases the loosening; a few repetitions of this alternating process tears out the stump. Very strong chains are requisite for this purpose. Large stumps may require an additional horse or a yoke of oxen. Where the stumps are remote from each other, iron rods with hooks may be used to connect the chains.

The power which may be given to this and to all other modes of using the lever, as we have already seen, depends on the difference between the length of its two arms. A yoke of oxen, drawing with a force of 500 pounds on the long arm of a lever 25 feet long, will exert a force on the short arm of six inches equal to 50 times 500 pounds, or 25,000 pounds, on the stump.

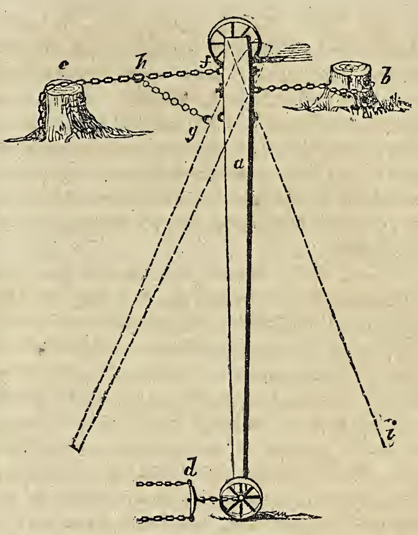


Fig. 3.

It was after an examination of the great power which may be given to the lever by increasing this difference, that Archimedes exultingly exclaimed, "Give me but a fulcrum whereon to place my lever, and I will move the earth !" Admitting the *theoretical* truth of this exclamation, and supposing there could be a lever which he might have used for this purpose, its practical impossibility may be quickly understood by computing the whole bulk of the globe ; for such is its enormous size and cubical contents, that Archimedes must have moved forward his lever with the strength of a hundred pounds and the swiftness of a cannon ball for eight hundred million years to have moved the earth the thousandth part of an inch !

Ketchum's Mower.

Eds. of the Country Gentleman—On taking up your paper of this date, the first thing that struck my eye, was the strictures on Ketchum's Mower, on page 56. Having myself been engaged in operating one of these mowers, this afternoon, on the farm of R. P. Waters, Esq., of Beverly, and having repeatedly seen the operation of one of them on the farm of Wm. Sutton, Esq.,of Salem, I think I can speak with some confidence of the manner in which the work was done. Both these gentlemen assured me that one acre of grass, yielding two tons, could be cut in one hour, and that a well trained team would cut four or five acres in half a day. I have never seen grass handsomer mowed and spread than by the machine on Mr. Water's farm. If your correspondent could witness work done by it, as I have repeatedly seen it, I think he would feel that justice demanded of him, to speak of its good qualities, as well as to point out its faults. It certainly mows much better over uneven ground, and even over fast stones, than I thought it possible for any cutting implement to be moved. I am pleased with its operation, and have no doubt it will be so perfected as to come into general use. I have the testimony of Mr. J. B. of Andover, who grows as much hay as any other man in this county, and does to much labor in getting it, that the machine works much better than he expected ; and he would not be without it for ten times its cost. Very truly yours, J. W. P. *Danvers, Mass., July* 27, 1854.

Queer Logic for an Editor.

Our readers will recollect the article of S. W. Johnson on the analysis of soils, which appeared a few weeks since in this journal, and which furnished overwhelming testimony that the analysis of soils *for ordinary practical farming*, was at best "*a chance game*;" and that more injury is done to the cause of true science by the wild and extravagant claims of a few pretenders in its favor, than by the open advocates of ignorance.

Dr. Lee, of the Genesee Farmer who has been a strong advocate of soil-analysis, and who still clings to it as a reliable auxiliary to practical farming with a sort of indefinite hope, has fallen upon this article, and either attempts or affects to criticise it. We say *attempts*, or *affects*, because we are not certain whether he wholly mistakes its intent in the part he quotes, or whether he perverts it merely for the sake of finding fault. We should not allow ourselves to suspect the latter, were not the meaning of the article so very plain as to be quite easily understood by intellects far below what we suppose Dr. Lee to possess. The article of S. W. Johnson very distinctly points out the failures, the disagreements, and the contradictions of several eminent chemists, for the purpose of showing how unreliable their analyses and their reasoning upon it may prove, even where in some cases they may give "closely agreeing results;"—and this very contradiction, so strong against Dr. Lee's favorite theory, he attempts to fasten *upon S. W. Johnson himself*, to show that he contradicts himself, and that "he is an inexperienced writer thus to present to his readers overwhelming evidence to convict him of gross carelessness, or gross ignorance."!! Verily, this mode of attack is only equalled in ingenuity by the man who when pursued by the sheriff and his posse, escaped by boldly joining in the hue and cry against himself.

Dr. Lee expresses his fear that such articles tend to discourage the establishment of Schools for scientific agriculture, and especially those dependant on State patronage. We cannot conceive how a search after truth is going to injure Science at all. Does scientific agriculture depend on the retention and propagation of old errors? Are farmers likely to fall in love with chemistry by being led in its most uncertain and unreliable paths? Would it not be much better to urge upon them, and upon our legislators of whom we would ask a school, the importance of teaching such parts of improved agriculture as science has thrown a certain and reliable light upon, and more especially such parts as an ENLIGHTENED PRACTICE has established as the best, among which we may briefly name subsoiling, underdraining, irrigation, rotation of crops, composting, horse-cultivation, horse-harvesting, improved-breeding, systematic management, &c., none of which originated directly in science, although science has improved and enforced them.

No greater injury is done the cause of science than extravagant and unfounded claims. It must invariably end in disappointment and disgust. A young farmer lately informed us that he had lost *seven hundred dollars* by false expectations thus held out to him through the teachings of the Genesee Farmer under the auspices of Dr. Lee. A chemical pretender in the vicinity of New-York, claims to have prescribed from analysis on "hundreds of farms," without a single failure; yet the public have never been furnished with a distinct statement of one of these experiments, detailing kind and quantity, before and after trial, accompanied by such evidence as our agricultural societies require. We sometimes hear of instances, as remote as isles in an ocean, where soil analysis has directly proved advantageous; but if its advocates wish to make any impression on a closely discerning public, they must furnish a *series* of experiments, where its prescriptions have proved *uniformly* or *generally* successful, and where the same result could not have been attained by any practically skilful farmer, who should have the privilege of other chemical knowledge, but without any knowledge of soil analysis.

We much regret that any one should set up false pretensions of the character we have mentioned, because in exposing their fallacy it gives captious persons an apparent opportunity to misrepresent our position; which has indeed been repeatedly done by a few prints of late years, while at the very moment those prints are acting most efficiently the part of real enemies to science, by misrepresenting its offices.

Underdraining.

There are many portions of high ground in the neighborhood of Pittsburg, (Pa.,) and along the Monongahela river, remarkable for its productive qualities. For many years past, it has been observed that these high hills, with ordinary cultivation, produce better crops of every kind, and grow superior fruit, to the bottom land in the same region. Many of the farmers would smile if told that the rich qualities of their land might be attributed to underdraining. The idea of draining hills from one hundred to three hundred feet elevation, they would consider ridiculous, from the fact that no swampy or moist land can there exist and instead of attempting to drain it, some invention should be had to retain the moisture. This very invention they have, in the most superior kind of underdraining.

These hills comprise a portion of the coal region of Pennsylvania, and cover most generally two strata of bituminous coal. The first, about from thirty to sixty feet from the upper surface, from four to five feet in thickness; and the second, at the distance of about sixty feet beneath the first, of from five to seven feet in thickness. The first strata, upon account of its depth as well as its quality, is but little worked at the present time, where the second is accessible; and in the immediate neighborhood of Pittsburg where the first 'crops out,' the second alone is worked. From the quality of this coal, and the great demand for it in all parts of the country, an immense number of tons are annually extracted—completely undermining many acres of surface, forming mammoth underdrains; and as a number of acres are taken out, the whole hill is let down—not together in one mass, but broken and mangled by the pillars and supports left by the miners. So that when the coal from any one hill is extracted and the pits abandoned, the soil upon its surface will have all the advantages of the best underdraining; and not draining of two or three feet in depth but of from ten to an hundred feet; and the ground being loosened to such a depth it is almost impossible that it should suffer from drouth. I have no doubt but this is one of the causes of the great crops on some of our hills.

The drouth at this time (July 17th) is truly excessive, not a particle of moisture apparent in the ground to the depth of eighteen inches; and the summer thus far has been so dry as to almost check the entire growth of all kinds of spring crops. The farm I cultivate, consists of about forty acres, all of which, excepting about ten acres, is undermined and underdrained by the taking out of the coal to the depth of from ten to one hundred feet. My crop of hay above the undermining, has averaged over two tons to the acre, while a "rich bottom" of one of my neighbors, did not produce one half the quantity.

Again, I have planted upon the underdrained portion about three acres of corn: and on the same place below the draining, in a rich garden deeply spaded, there is planted a bed of the same kind of corn. The latter has received careful garden culture, and the former, planted on clover sod, the common field culture. The first looks as if it wanted rain badly, but still has a good color and healthy appearance; but the leaves of the latter, look more like torches or fancy cigars, so closely have they wrapped themselves up than any growing vegetable. The product of hay, as well as the present appearance of the corn, can be partly at least, attributed to the underdraining.

These advantages are still more apparent upon the growing of fruit. Formerly the bottom land was always sought after for gardens and orchards. A few years since an enterprising man fixed upon the top of one of our highest hills, (Mount Washington.) He now brings the first, largest and best fruits to market, and gets the highest price. *His land is undermined*, and I understand he attributes his success greatly to this fact. B. B. *Pittsburgh, Pa.*

Flax Culture.

The Earl of Albermale, as President of the Norfolk Agricultural Association, has called the attention of the members of the Association, and of the public, to the consideration of the question, 'How are the Agriculturists of Norfolk (and of England) to be supplied in future at a moderate price, with the necessary articles of linseed and oil-cake, if we continue at war with the chief producing nation of those articles?'

This is a question deserving consideration in England, which imported last year 94,000 tons of flax, of which Russia furnished 64,000, and, also, 63,000 tons of hemp, of which Russia furnished 41,000 tons.

These importations cost, at peace prices, five millions of pounds sterling, and at present war prices, would be of the value of nine millions. Here is a premium on the growth of flax and hemp of four millions sterling. The Earl then proceeds to state other considerations which tend to make it obvious that flax might be advantageously raised at home. Such of these considerations as are as applicable to the condition of things in America as to that in England, we shall submit to our readers with as much succicntness and brevity as possible.

One of the great merits of flax culture, according to the Earl of Albemarle, is the necessity for the exercise of skill in its cultivation. It is therefore a crop better adapted to the present advanced state of agriculture than it was in former times. As the present high prices of wheat and grain cannot always continue the Earl asks if it is not therefore desirable to have a crop that will indemnify the farmer for the occasionally low price of grain. Flax, he thinks is such a crop, being the most remunerative that can well be grown. From various parts of the country he has obtained estimates, according to which the profit of a crop of flax would, at usual prices, be more than double that of a crow of wheat.

Another inducement to the cultivation of flax is this that it would afford increased employment to persons of both sexes, of all ages, and at all seasons of the year.

As another inducement it is stated that flax will grow on almost every description of soil, and will take its plase in any part of a rotation. Sir John Mac Neil, one of the largest cultivators of flax in Ireland, says that, though the soil best adapted for the growth of flax is a deep rich loam, yet he grew 600 aces, in 1853, on almost every description of land. Flax appears to grow best and produces the largest quantity, when sown on land on which oats had grown the previous year, but it is the practice in Armagh and Down to sow it after potatoes or turnips, and sometimes after barley. In every case the land should be exceedingly well cleaned, and free from weeds. The seed should be sown immediately after the land is plowed, as the seed is generally six weeks in the ground before it appears, and will be longer if the ground should have lost the moisture it has when first plowed before being sown. After plowing, the land should be harrowed, then rolled with a heavy roller, then harrowed with a light harrow and the seed sown, and finally rolled with a light roller. When the plants are 3 or 4 inches above the ground, the field should be weeded by children, *against the wind*. The plant should be pulled when the lower leaves appear to be decaying, or getting tinged with yellow. This is a very material point to be attended to, for if allowed to get too ripe the *fibre* will be injured, and if pulled too green the *seed* will be injured. The average quantity produced from an acre, in Ireland, may be taken at 2¾ tons weighed when dry, or 650 to 750 or 800 lbs. of dressed flax.

Grass seeds and clover may be sown with the flax without any injury to the latter. The land will be very smooth for mowing. Sir J. Mac N. thinks that it is a mistake to suppose that flax injures the land. It may be sown every 4th or 5th year without injury to the land, if the crop is properly weeded

Ice Houses.

Messrs. Eds.—I wish to build an ice-house, and it has occurred to me that I might make use of some of the spare room in my cellar for the purpose. Being in a stiff clay soil it requires a drain. A window in the north side affords a chance for sliding in the ice. The three stone walls of the cellar would also be so much saved in the construction. If properly lined and filled in with tan or saw-dust would such an ice-house answer its purpose, as well as one constructed by itself in the usual mode? W. H. S. *Adrian, Mich.*

Ice houses are not unfrequently constructed in cellars, and succeed well if sufficiently capacious, with good non-conducting walls, and with good drainage without the admission of air through the drain-pipes. We have known several good ice-houses situated under carriage houses, shops &c., the ice being well imbedded in saw-dust in addition to the usual provision for excluding heat.

Application of Manure.

Messrs Editors.—I would like to be informed when is the best season of the year to apply manure upon grass land—spring or fall? My soil is sandy, though I have applied 50 loads of meadow loam to the acre. A Subscriber. *East Hartford, Ct.*

By all means, apply manure to grass lands in autumn—the fall, winter, and spring rains will carry down the soluble parts among the roots, and the plants will have the full benefit at the commencement of their growth. There will be very little evaporation of the manure comparatively, during winter, and the remaining portions become well settled about the plants, and do not hinder their growth. On the other hand, if applied in the spring, the first tendency is to smother and check,—some time elapses before the enriching portions get down among the roots; and the warm weather promotes the escape of the volatile portions of the manure.

Inquiries—Seeding—Destroying Sorrel.

Messrs Editors—Being a subscriber to your valuable paper the "Cultivator," I have taken the liberty as a young farmer to make some inquiries and to ask some advice of those more experienced in cultivating the soil. My farm is a gravelly loam mixed with some sand. One year ago last spring I sowed 16 acres to oats and seeded it to clover and timothy. On that intended for pasture I mixed equal parts, sowing 12 qts. per acre. On that for meadow one third clover, putting on the same amount of seed per acre. One field the seed was bushed in—another rolled in and the third nothing done. There came a pinching drouth, and if the seed ever germinated it was killed; and the result this year seen, is fields covered with sorrel, it being natural to the soil. Now I wish to inquire of some practical farmer the cheapest and best mode to pursue with this land to kill out the sorrel and make it produce again. One neighbor says sow lime; another says sow ashes, and a third says mix the two with gypsum or plaster and the sorrel will disappear. But mind you, they do not speak from *experience*—they do not *know*—they *guess.*—We want experimental knowledge not guess-work. J. F. B. *Unadilla Forks, Otsego Co. N. Y.*

United States Agricultural Society.

At a meeting of the Executive Committee of the United States Agricultural Society, held in the City of Washington, in February last, it was resolved that the Society would hold no Exhibition in any State having a State Agricultural Society, without the assent of the Officers, or of the Executive Committee of such Society.

The citizens of Springfield, Ohio, having requested this Society to hold an Exhibition of Cattle, at that place, during the current year, and generously subscribed about *ten thousand dollars* to defray all the expenses of the same, and to guarantee the Society against loss; and the Executive Committee of the Ohio Agricultural Society uniting in the request, the Executive Committee of this Society have concluded to hold a NATIONAL SHOW OF CATTLE, open to general competition, without sectional limit, on the 25th, 26th and 27th days of October next, at Springfield, in the State of Ohio.

The friends of Agriculture in all the States of the American Union, and in the neighboring provinces of Canada, are invited to co-operate with us, so that this Exhibition may be the more extensively useful, and be alike creditable to the generous citizens of Springfield, with whom it originated,—to the Contributors and Visitors, who sustain it,—and to the United States Agricultural Society, who are so deeply interested in its success.

In consequence of the holding of this Show of Cattle, the contemplated Exhibition of Horses, at Springfield, Mass., and the Show of Sheep, in Vermont, will be omitted.

The Journal of the Society, which the Executive Committee have concluded to issue once in each year—four numbers in one,—will appear in January next; and will contain the Transactions of the Society at its last Annual Meeting, the Lectures and Addresses delivered at that time, a full and faithful account of the Springfield Show, with other valuable papers, by eminent members. This volume will be forwarded to all members who have paid their annual assessments for the year 1854.

MARSHALL P. WILDER, President.
Wm. S. King, Secretary.
Boston, August, 1, 1854.

Insects and Farming.

I have been a merchant eight years and found it a risky business —have been a farmer two years and find it also risky. We plant our corn and as soon as it makes its appearance we have to fight worms and crows. And here let me say I know from experience that the only way to save a corn field from being devoured by worms is to *dig them out and kill them.* I employed four boys this season and saved four acres by worming. Yours. J. F. B.

The Queens Co. Ag. Society will hold their next fair at Jamaica, on the 28th Sept.

Notes for the Month.

New Advertisements.—The attention of those wishing to import improved stock, is invited to the notice of James Douglass, East Lothian, Scotland. Mr. D. recently shipped to this country quite a lot of superior animals, ordered by H. L. Eades, Esq. for the Shakers of Warren Co., Ohio, and is, we are told, a gentleman in whose integrity and judgment purchasers may safely rely.

We are frequently inquired of for fancy rabbits. It will be seen that Mr. Van Rensselaer offers a few pairs for sale, which we know to be genuine.

Advertisements.—We invite attention to several important advertisements in this number. Among them may be found an important notice from the State Ag. Society, setting forth the arrangements for the coming Fair. Breeders of Short Horns are referred to the advertisement of Mr. Strafford who it will be seen, is to sell a lot of young Bulls, on the 5th Sept. containing more or less of the best blood in England. The time is short, and those who wish to purchase should send their orders to Mr Strafford by the first Steamer. For other high bred Short Horns, for sale in this country, see the advertisement of Mr. Rotch, of Otsego, and Mr. Taber of Duchess—for Sheep and Pigs those of Messrs Wells and J. R. Page. For concentrated Manures, see the advertisements of Thos, Hollingworth and Son, Utica, Longett & Griffing, and Lodi Manufacturing Co., New York.

Those who do not wish to undertake a regular College Course, will find an alternative offered in the Scientific School connected with Yale College. It is advertised in this week's paper, and merits the attention of all.

Imported Sheep.—We had the pleasure of examining a fine lot of Lincolnshire Sheep, consisting of eight yearling ewes and two rams, just received per ship Windsor Castle from Liverpool, by John R Chapman, Esq. of Oneida Lake, Madison Co. N Y. They were selected from the flocks of Messrs. Kirkham, Shelby, Topham and Fowler, celebrated breeders of the original long-wooled Lincolns. Although they were over eight weeks on shipboard, they looked remarkably sprightly and healthy, and were a very superior lot. The fleeces taken from these ten sheep last spring weighed 112 lbs. or a trifle over 11 lbs per head. We notice by the last London *Mark Lane Express*, that Mr. Kirkham of whom three of the ewes and one of the Rams above mentioned, were procured, received a prize of $50. at the show of the Royal Ag. Society, last month, for a pen of five ewes of the improved Lincoln breed.

Trial of Reapers.—J. S. Wright of Chicago, proprietor of "Atkin's Automaton or Self Raking Reaper," and J. H. Manny of Rockford, Ill., the inventor of "Manny's convertible Reaper for Grain or Grass," having agreed to a trial of their machines for a prize of $1,500, and appointed Messrs. M L. Dunlap, Hiram Miller, and R. Emerson, Jr. to decide the question, the trial commenced on the 26th July on the farm of David Stockwell, near Belvidere, Ill. and continued five days. The points to be decided were the relative amount of manual labor in "*Raking, Binding and Shocking*, twenty acres to be cut by each machine. Any loss of grain to be charged to the proper party." The Judges after devoting 5 days assiduous labor to the trial, say—"we find the contest so close and so many excellencies in both Reapers that we are unable to say, under the circumstances, which should have the preference. In some respects one machine has the advantage over the other, and *vice versa*. Which has actually the preference, in all respects, is a matter too nice for us to decide."

The papers announce the death, at Detroit on the 24th July of cholera, of Mr. Charles Fox, senior editor of the *Farmer's Companion* published at Detroit, and Lecturer on Agriculture in the University of Michigan. Mr. F. was formerly an Episcopal clergyman, but for some years past has devoted his attention almost exclusively to the study and practice of agriculture. Beside his contributions to the Farmer's Companion, and various addresses, he had just issued a work on Agricultural Chemistry.

Galloway Cattle.—The *Canadian Agriculturist* for July, enumerates quite a list of domestic animals which have just been imported by several public spirited gentlemen of that province, and among them three very fine Galloway cattle, (a bull and two heifers,) brought out by Mr. Roddick of Hamilton. Among the other importations, are a Durham bull, a pair of Yorkshire pigs, and forty Leicester sheep, by Mr. Dickinson of Port Hope—a Durham bull and some superior sheep, by Mr. R. Wade, Jr., of Cobourg; and a lot of Leicester sheep by Mr. Geo. Miller, of Markham.

Tall Timothy.—Mr. Beny. Snyder of Bethlehem, in this county, has sent us a small bundle of Timothy grass, the stalks of which measure from 4 ft. 6 in. to 4 ft. 9 in. in length.

"Tall Corn."—We make the following extract from a letter of a correspondent in Maryland, merely premising that our statement of the probability of the Courier and Enquirer's tale, had reference entirely to the story itself, and not to the number of rows of corn in the ear, as detailed therein. "I was sorry to see in a No. of the Co. Gent. that *you* say the "Tall Corn" tale of the N. Y. Courier and Enquirer, "*may be true.*" The saying that ears of corn had "twenty-nine" and "thirty-one" rows of grains on them, is saying that the writer knows nothing about corn. The same law which turns a bean vine one way and a hop vine another, says there shall be no odd row on corn, and in writing the tale the writer should have kept probability in view. For some ten or fifteen years I dealt largely in corn (not distilling it.) I have had an ear of corn weighing (on the cob) two and a half pounds, and another ear having 1812 grains on it. Corn is to the other grains what iron is to the metals, worth *all* the others together."

I might have added *thirty-two* rows are not uncommon on an ear—the earliest corn has least rows.

Premiums on Babies.—The American Agriculturist, in publishing the list of premiums offered by the Stark county (Ohio) Ag. Society, for the three "prettiest babies," and also for the "largest and heaviest child" under one year—very justly expresses the importance of a "Scale of Points," on the same principle as those established by the New-York state Agricultural Society for improved stock, & suggesting a marble model for the use of committees, winds up with the interesting and important statement that "if a satisfactory "Scale of Points" and "models" could be adopted by the Agricultural Societies in these matters, the conducting Editors of this journal might be tempted to make an entry for premiums, as each has been blessed the past month with what they consider a pair of "models" of the first order." Now the obvious meaning of this language,—"*each* has been blessed with a *pair*,"—is that the two editors have had *four* children in the aggregate, added to their families within a month—which is so large a story, that we would suggest that it be more distinctly expressed, and perhaps that legal testimony be furnished of so extraordinary a fact, for those who believe nothing without the strongest evidence.

Benefits of Under-draining.—The Rural New Yorker gives the results of an experiment made by John Constable, of Lewis county, N. Y. He had a meadow that annually produced about half a ton of very indifferent hay. Two years ago, he cut some drains through it, three feet deep, and laid them with stones. This year, the meadow produced two and a half tons of excellent hay to the acre.

☞ **Thos. Betts** (of Herts, England,) has established an agency, 35 Wall street, New-York, for the importation of thorough bred stock from England. Mr. Betts has letters from the officers of the Board of Agriculture in Canada, giving assurances that business entrusted to him will receive prompt attention. [See Advertisement.]

The Largest Strawberries.—A correspondent of the N. Y. *Herald*, having given an account of the famous British Queen strawberries, some 6½ inches in circumference, from California, Q. Q. writes to the editor of that paper that a plate of the same variety was sent to the Massachusetts Horticultural Society Saturday exhibition, the end of last June, two or three of which measured 8½ inches in circumference; they looked like tomatoes, and were raised at the private garden of Saml. G. Gustin, Esq., of the Newark Meadows Nurseries. He adds a certificate from Geo. C. Thorburn, Lodi, N. J., who says "I saw them."

Turnip-hoeing.—Quite an animated discussion has been carried on, of late, in the columns of *the Mark Lane Express*, on the question of the proper distance at which turnip plants should be drilled and left at hoeing. Some contend for 9 and some for 11 inches between the plants, the drills being 12 inches apart. Others contend for as much as 18 inches or more between the drills and 18 inches or more also between the plants in the drill. One who advocates this largest space, says that he saw last winter some white turnips on a desk in the Corn Exchange at Bury, three of which would fill a bushel; and he says that he has doubts whether three could be put into an imperial bushel, if furnished with a shut down lid. The general opinion seems to be that the heaviest crops may be gathered when the drills are 12 inches apart, and the plants are set with an 11 or 12 inch hoe, thus leaving the plants about 12 inches apart. When large bulbs are expected from the richness of the soil or on account of special manuring, a larger area is allowed.

Bloody Milk.—I have a valuable heifer which gives bloody milk from one teat—will some one tell me a cure? J. F. B.

Wheat Drill.—(A Subscriber, St. Clairsville, Ohio.) Placing the drill-tubes unusually near together, as proposed, causes the drill to become clogged with clods, stones, and sods, while no advantage is gained, as the roots at ordinary distances extend and meet each other, and cover the whole surface, and the stalks also fill up the space above ground. Increasing the breadth of the drill, makes it too heavy and hard to draw, and more difficult to fit inequalities of the surface.

Wheeler's Horse Power.—I have had some experience in the use of Horse Powers. Now I would say to your correspondent, M. S. B., by all means purchase one of Wheeler's endless chain powers, and if it does not work to perfection, and fulfil all his expectations and satisfy all his desires, charge it to my account, and I will pay all damages. I consider it the most perfect horse power for a farmer, that can be imagined. A Practical Thresher and Farmer. *Wauwalosa, Wis.*

China Tree, &c.—I wish your correspondents to tell us more about the China tree, describe it, and where it can be had, and how to use it, to expel bots. Your directions to kill Canada thistles are sure—and to kill white daisies, plow them all under when in full bloom, before the seed will grow; and sow one bushel of buckwheat on an acre. I have seen them killed when like a meadow. E. Daniels. *Catalunk, N. Y.*

Farming in California.—A correspondent of the Pittsburgh *Daily Union*, who dates at Cold Springs, California, says: "This is one of the greatest countries for farming, (or as it is called here "Ranching") under the sun. A man with a good "ranch," in the valley, can make an independent fortune in a few years, not unfrequently in one! The first eleven miles of country we passed through, after leaving Sacramento, was one vast field of either barley or wheat—

the barley being just ready to harvest. A farmer is paid in this State for the labor he spends on a farm: the average yield of wheat, being from sixty to eighty and frequently one hundred bushels per acre. Stock here does not require, as in the "States," to be fed from six to seven months in the year; but keep themselves fat the year around on the pasture.

The thermometer averaged from 90° to 100° in the shade, every day since I came. The atmosphere being so pure, and the air so fresh, that it does not feel oppressively warm at all. We had quite a smart shower of rain this morning, which is a very uncommon thing here at this season."

Crops in Great Britain.—The Mark Lane Express of July 3rd reports very favorably as to the whole of the crops in England. It says: "This we may safely venture to assert, that in the event of our having only a moderate amount of moisture, seasonably warm weather and very few gales, together with an absence of blight, we shall reap one of the most abundant crops on record."

The North British Agriculturist (Edinburgh) of July 5th contains returns from all the districts of Scotland, on the state of the crops, from which it appears that taken together, the promise is favorable, particularly in relation to wheat, oats, beans and turnips.

Fair at Wheeling.—The *Western Virginian Ag. Society* will hold their next Fair at Wheeling on the 13th, 14th and 15th Sept. Their prize list is large and various, and as it is open to all, the show will undoubtedly be very large as the attendance of many exhibitors from the neighboring counties in Ohio and Pennsylvania, may well be anticipated.

Dutchess Co. Fair, at Washington Hollow, Sept. 24—27.

Horse Powers and Threshers

OF all the most approved kinds—Wheeler's, Westinghouse's and Emery's Railway Powers and Threshers. Taplin's, Bogardus', Palmer's and Eddy's Sweep Powers and Threshers. For sale by LONGETT & GRIFFING,
Sept. 1—m3t No. 25 Cliff street, New-York.

SPANISH MERINO SHEEP.

THE subscribers offer for sale 12 Bucks, and 15 Spanish Merino Ewes, at very reasonable prices.

A part of the sheep are a cross of the Atwood flock. A rare opportunity is afforded to farmers to improve their flocks at a small expense.

L. S. & L. R. WELLS,
New Britain, Ct. Aug. 17—w1tm3t.

Pittsburgh Agricultural Tile Works.

DRAINING TILE of the annexed sizes for land drainage, manufactured by James Wardrop & Co., Pittsburgh, Pa.

Horse Shoe Tile.		
4½ inch caliber,	$18	per 1000 feet.
3½ do.	15	do
2½ do	12	do
Sole or Pipe Tile.		
4 inch caliber,	$40	per 1000 feet.
3 do	18	do
2 do	12	do

Tile of large size suitable for Drains about Dwellings, Yards, Cisterns, Ice Houses, &c., from $4 to $8 per 100 ft. Pamphlets containing all necessary information mailed to applicants, and orders promptly shipped. Samples may be seen at the Seed Warehouse of JAMES WARDROP.
Aug. 24—w4tm1t*

YALE SCIENTIFIC SCHOOL.

THE FALL TERM in this Institution, will commence on Wednesday, Sept. 13th, and continue fourteen weeks.

FACULTY.
BENJAMIN SILLIMAN, M.D., LLD.,
Professor of Mineralogy and Geology
WILLIAM A. NORTON, M.A.,
Professor of Civil Engineering.
JAMES D. DANA, LL.D.,
Silliman Professor of Natural History.
BENJAMIN SILLIMAN, Jr., M.D.,
Professor of General and Applied Chemistry.
JOHN A. PORTER, M.A.,
Professor of Analytical and Agricultural Chemistry.

The object of this School is to fit students for the practical application of the branches taught. For particulars, apply to the Professors in the several Departments, or to
JOHN A PORTER, Dean of the Faculty,
New-Haven, Ct., Aug. 17, 1854—w4tm3t.

Superior Trees—Premium Strawberries, &c

WM. R. PRINCE & CO., Flushing, wishing to clear off 50 acres of their Nurseries where the Rail Road passes, will sell their Superior Fruit and Ornamental Trees and Shrubbery, including Evergreens, at very reduced prices in quantity. Also an Unrivalled Collection of Strawberries, Bulbous Flowers, Pæonies, &c., at the reduced rates of their Catalogue for 1854-55, which will be sent to applicants. A convenient credit allowed where payment is sure. N. B.—100,000 Pears of all sizes, at low rates Aug. 17—w1tm1t.

SHORT-HORN CATTLE.

THE following short-horn and other stock, (all pure bred animals,) were not long since sent out by Mr. Rotch of Morris, Otsego Co., N. Y. to his farm, situate within one mile of Albion, the county town of Edwards Co., Illinois, and are now for sale, as he is about disposing of the farm.

For further particulars address Col. HUDSON, on the premises.

CUBA—nearly red, with but little white, is a bull, calved Ap'l. 17, 1853—sired by Prophet, dam Coral by Bertram 2d, 3144—g. d Conquest by Washington 1566—g. g. d. Pansey by Blaize 76—g. g. g. d. Primrose by Charles 127—g. g. g. g. d., by Blythe Comet 85—g. g. g. g. g. d., by Prince 521—g. g. g. g. g g. d., by Patriot 486.

Prophet is a grandson of *Yorkshireman* 5700, who was bred by Mr. Thos. Bates. Prophet's dam was Phænix—see produce from Princess, vol. 5, page 799, of Coates' Herd Book, to which all the numbers in these pedigrees refer.

TEA ROSE—A roan cow, calved May 2d, 1848, sired by Westchester—dam White Rose by Splendid 5297—g.d, Yellow Rose by young Denton 963—g g. d. Arabella by North Star 460—g. g. g. d. Aurora by *Comet* 155—g. g. g. g. d. by Henry 301—g. g. g. g g. d. by Danby 190.

Westchester was by *Yorkshireman* 5700. This Tea Rose is a descendant, on the part of her sire, from the Kirkleavington herd, and has, from her mother, a strain of *Comet* blood.

PRAIRIE ROSE—A red heifer calf, from Tea Rose, by Prophet—see pedigree of Tea Rose.

PHEASANT—A red heifer, calved in the spring of 1852, by Prophet—dam Phlox by *Yorkshireman* 5700—g. d. Phœnix by Hero 4020—g. g. d. Princess by Washington 1566—g. g. g. d. Pansey by Blaize 76—g. g. g. g. d. Primrose by Charles 127—g. g. g. g. g. d. by Blithe Comet 85—g. g. g g. g. g. d. by Prince—g. g g. g. g. g g. d. by Patriot 486.

Besides the above there are a few SOUTH DOWN SHEEP and lambs, also some FRENCH MERINOES & POULTRY, all purely bred.
Aug 17—w1tm1t.

GUANO NOTICE.

AS there is a substance now selling by some dealers in this city and Brooklyn, for the No. 1 Peruvian Guano, we caution the agricultural public who may purchase Peruvian Guano this season, to observe that every bag of the genuine article will have the following brand:

NO. 1,
PERUVIAN GUANO,
IMPORTED BY
F. BARREDA BROTHERS.

The price is now established for this season, at $55 per tun of 2,000 lbs. When taken in lots of five tuns and upwards, a discount will be made. LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25, Cliff-Street.
Aug. 17—w6tm2t New-York.

SHORT-HORNED CATTLE

FOR SALE.

I HAVE a few choice male and female *Short-Horns* of various ages, to dispose of, at my farm, three miles West of the Harlem R. R. Station, at Dover Plains, N. Y.

My stock has been bred from animals purchased of Geo. Vail, Esq. of Troy, Col L. G. Morris of Fordham, Mr. Lathrop of Mass., J. Sheaf, Esq. of High Cliff, Dutchess Co., Jas. Lennox, Esq, New-York, and other eminent breeders.

S. T. TABER,
Chestnut Ridge, Dutchess Co., N.Y.
August 10, 1854—w2tm1t.

A NEW FERTILIZER.

THE LODI MANUFACTURING COMPANY, (who have been manufacturing Poudrette for 14 years,) have, by a recently discovered process, been enabled so completely to disinfect Night Soil, as to present to the Agricultural World that long sought after and greatly to be desired article.

PURE NIGHT SOIL, DISINFECTED AND DRIED.

This article differs from Poudrette, and every other article of manure made from human excrement, from the fact that it contains no mixture of foreign substance whatever, (except 5 per cent. of calcined gypsum, which is used to retain any fugitive ammonia,) the sulphuretted hydrogen which is the offensive gas escaping from Night Soil, is taken from it by a peculiar process. It is, also, entirely separated from rubbish not smaller than a pin's head, and so concentrated, that its bulk is decreased one half by manufacture, yet, at the same time, none of its virtues are allowed to escape. The Lodi Manufacturing Company have selected the Chinese words dessicated night soil, as the name for this article, viz:—

Ta-Feu,

and offer it for sale under the following guarantees:—

1st.—That it is free from unpleasant odor, and contains 95 per cent. of night soil concentrated, and 5 per cent. of calcined gypsum, and nothing else.

2nd.—That it cannot be surpassed by any other manure in the world, either in fertilizing power or in cheapness

3d.—That it is equal to Guano in the proportion of 4 pounds of Ta-feu to 3 pounds of Guano. That it is equal to any superphosphate of lime now in market *pound* for *pound*, on any crop, and is one-third cheaper than Guano, and twice as cheap as superphosphate.

4th.—It contains every kind of food necessary to the growth of plants, and is perfectly soluble in water, making, therefore, a splendid *top dresser* on grass and grain.

It is perfectly dry, and can be bagged or barrelled, and sent to any part of the United States. Price $20 per ton, of 2,240 lbs.; for any quantity over 10 tons; under that, $25. No charge will be made for cartage or package.

Persons wishing to try it, can send us any amount, from $3 upwards, and the exact number of pounds will be forwarded, with directions for use.

We recommend it strongly on cabbage plants, turnips, wheat, grain and grass, either sowed or harrowed in, or as a top-dressing, after the grain is up. On cabbages and turnips it has already been tried with astonishing results, having doubled the size of cabbage plants in a week.

For 300 to 500 lbs. per acre will be a first rate dressing for grass in the fall and for grain followed by grass; a tablespoonful is more than sufficient for a cabbage plant.

All communications must be addressed to the

LODI MANUFACTURING COMPANY,
74 Cortlandt St. New-York.
August, 17—w4tm2t.

Land for Sale.

THE subscriber offers for sale, a portion of his valuable Tract of Land, situated in the county of Fairfax, Virginia, on, and near the Turnpike leading from Georgetown to Leesburgh, 16 miles from the city of Washington. 2 miles from the Potomac river and canal, and within 2 miles of the Loudoun, Alexandria, and Hampshire Rail Road. The tract contains about 2000 acres of Land; of which, from 500 to 600 are in a heavy growth of oak and chestnut, and the remainder of the wood land is in pines of the second growth. It is of a deep red soil, and adapted to Grain, Plaster, Clover, and all kinds of Grass. On the premises are 4 comfortable Dwelling-Houses, and also a Grist-Mill, but not in running order. The land will be sold in lots of 100 or 200 acres, or as the purchaser may desire. For further particulars inquire of the subscriber on the premises.

S. S. MILLER,
July 1, 1854—mtf Spring-Vale, Fairfax Co., Va.

Agricultural Books,

For sale at the office of the Country Gentleman.

Imported Cattle, Horses and Sheep.

THE subscriber has FOR SALE the following first-class SHORT-HORNED CATTLE: BENEDICT, (7828) got by the celebrated sire Buckingham, (3239) dam, Hawthorn Blossom, by Leonard, (4210). CAPT. BALCO, dark roan, calved April, 1853, got by Balco, (9918) dam Cowslip by Upstart, (9769). VICTOR, white, calved Nov. 1, 1853, got by the famous bull Crusade, (7938) dam Victoria by Sultan, (7566). Also a few COWS and PRIZE HEIFERS; SIX PURE-BRED CLYDESDALE DRAUGHT MARES, all winners of prizes, one of which, a three-year old, won eight first premiums last year, thereby beating all Scotland. Also, a few SHEARLING LEICESTER RAMS AND EWES, descended from prize sheep on both sides, combining beautiful symmetry, good quality of mutton, with a heavy fleece of fine wool. Benedict is one of the best bulls Buckingham ever got, and is from Mr. Richard Booth's famous cow, Hawthorn Blossom, who is dam and grand-dam of more good animals than any other cow in England. Capt. Balco perhaps the most promising young bull of the day, has been exhibited twice; first in Yorkshire, where he defeated, when only four months old, the animal that obtained the second prize at the great meeting held at York, although eleven months old: second at Haddington, East Lothian, when only a year old—he distinguished himself by not only obtaining the prize in his own class, but against bulls of all ages, a performance that has never been done at any previous meeting of that Society. He is entered for exhibition at the three following National Agricultural Meetings: The Royal English, at Lincoln, in July; the Highland Society at Berwick-on-Tweed, and the Royal Irish at Armagh, and could be delivered after the last meeting.

Victor is a very stylish calf and will make a show bull. The stock of the subscriber is a combination of blood of the most successfull prize animals in England and Scotland during the last ten years; and any party wishing to commence breeding, or to improve their present stock, may secure the most valuable blood extant. He begs to state that he has had awarded him during the last ten years ninety-three premiums for Short-Horned cattle and 115 premiums for Sheep. The animals sold from time to time from this herd and flock have invariably distinguished themselves as winners of prizes. Personal inspection invited. For further particulars address.

JAMES DOUGLAS, Drem, East Lothian, Scotland.
helstanford Farm, June 13, 1854.

English Cattle.

TO Agricultural Societies and others requiring the best bred Cattle from England, embracing Pure-Blood Horses, Short-Horns, North Devons, Herefords, Ayrshire and Alderney Cows.

Also, Pure-Bred South Down, Cotswold, and Leicester Sheep.

Also, Suffolk, Essex and Berkshire Swine—Imported on commission into any part of the United States and Canada, by

Messrs. THOS. BETTS & BROTHERS, of Herts, Eng.

Cattle ordered previous to first September, will be insured, if desired.

Every information with regard to terms and shipment of Stock to America, will be strictly attended to by applying to JAMES M. MILLER, 81 Maiden Lane, New-York City, who is fully authorized to act as our Agent.

JAMES M. MILLER, THOS. BETTS & BROS.
Agent, New-York City. Herts, England.
July 1—w&m3m

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits, and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Prouty & Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Cortlandt-street, New-York.

March 1—mtf GEO. H. BARR & Co.

Manures.

PERUVIAN GUANO, Improved Superphosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Poudrette, Plaster of Paris, Charcoal, &c., &c., for sale by

GEO. H. BARR & Co.,
March 1—mtf 53 Cortlandt-street, New-York.

Albany Agricultural Works,

Warehouse and Seed Store, 369 and 371 Broadway, Albany.

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Contents of this Number.

THE FARM.

Wheat and Chess, ... 265
Smokey Chimneys—the Weevil in Wheat, ... 266
Telford Roads--Thermometer for Farmers--Ketchum's Mower, ... 267
Plan for a Barn—Improved Fences, ... 268
Curing Hay—Wheat without Summer Fallowing, ... 269
Walls for Open Cisterns—Fall Plowing, ... 272
Dickinson's Address, ... 273
The Season, Wheat Weevil, and Salt for the Grub, ... 275
Adulteration of Manures—To Destroy Yellow Dock, ... 276
Raising Corn for Fodder—Ground Hay, ... 277
Sowing Grass at Midsummer—Wheat Insect, ... 279
Calvert's Farm Buildings, ... 280
Mechanical Conveyance of Manures 283
Agriculture of the Sandwich Islands, ... 284
Book Farming—Indian Corn 284
Lime as a Fertilizer—Coal Tar, &c., ... 285
Stump Machines—Ketchum's Mower, ... 287
Queer Logic for an Editor—Underdraining, ... 288
Culture of Flax, ... 289
Ice-Houses—Application of Manure—Destroying Sorrel, &c —N.Y. S. Agricultural Society, ... 290
Notes for the Month, ... 291

THE GRAZIER.

Improve your own Stock—Stabling Cows—Experiments in Feeding, ... 270
Flooring for Stables, &c., ... 272
Grazing and Butter Making, ... 273
Dorkings and Cure for Gapes, ... 277
Twin Calves and Abortion in Cows, ... 285
Scratches and Staggers in Horses, ... 282
Degeneracy from Breeding in and in, ... 282
Gas Tar for Wounds—Lice on Animals, ... 282

THE HORTICULTURIST.

Notes from the Horticulturist—Gooseberry Culture, ... 271
Grape Culture, ... 272
North Western Fruit Convention, ... 274
Fruit Growing in Canada, ... 276
The Tiger Flower—Seedling Petunias—Tropeolum Lobbianum, ... 278
Mildew on Grapes and Gooseberries—Striking Cuttings—White Raspberries, ... 279
Summer Pears—Green Aphis, ... 286

ILLUSTRATIONS.

Telford Roads, ... 267
Plan of Barns and Fences, ... 268
Tiger Flower and Nasturtium, ... 278
Mr. Calvert's Farm Buildings, ... 281
Three Summer Pears, ... 286
Stump Machines, ... 287

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THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD To Improve the Soil and the Mind. SERIES.

VOL. II. ALBANY, OCT., 1854. No. X.

Shelter for Farms.

The importance of shelter has been long and well understood by gardeners. Wall-protection has been in use from time immemorial. Every skilfull horticulturist is aware that tender plants will survive severe winters when surrounded or overshadowed by evergreen trees; and the same result has been observed on plants growing in common woods. The shelter of high picket fences, in parallel rows, enabled **Frederick Tudor** of Nahant, to transform a bleak surface, where the ocean-tempest and spray prevented the growth of a single natural shrub or tree, into one of the most luxuriant gardens of the country.

But the importance of shelter on farms, and more especially for the protection of crops, has not been generally appreciated. Exposed surfaces, over which the cutting winds of winter sweep freely, are injuriously affected in many ways. The snow, which should form a protecting mantle, is swept off into drifts, and the bare earth subjected to the full action of the hardest frosts. Young plants of grass and winter grain, after being heaved up by this intense freezing, are beaten about and often actually torn out by the action of the strong wind upon them. This every observant farmer must have seen. But winter is not the only season of injury. Sweeping tempests beat down grain fields, level the heavy grass of meadows, and break and injure young half-grown fields of corn. Young and newly planted orchards are severely frozen, whipped about, destroyed, and dried up by the blasts which for several winter months sweep over them.

To avoid these evils, an experienced farmer of western New-York has made to us a valuable suggestion, well worthy of the careful and timely attention of every occupant of new land. He proposes that every farmer who is about to clear the land of its forests, should leave a strip or belt of woods, at least four rods wide, at distances asunder not exceeding eighty rods, and running in such a direction as to afford shelter from the prevailing winds. This should be kept fenced on both sides, so as to allow the thick growth of young trees, which will render the screen more perfect, and afford a constant succession as the older trees are removed for fuel. Every farmer needs a certain amount of reserved woodland; and it may be as well reserved in this advantageous shape, as in one that from its position shall be of no benefit to the land. On small farms, one single belt, of such a width as may afford the necessary wood for use, judiciously located to protect the farm, may be sufficient; on large ones they should be at regular intervals. In many cases, the borders of a gully or stream may be selected as the place for the woods, where the wet or broken land would be of comparatively little value. Farmers are sometimes greatly incommoded by their neighbors clearing away woodland, on which they had depended for protection; but no such inconvenience would be felt if they had made proper provisions on their own land.

Some of the trees thus left exposed, may be blown down by the winds, but the rest will soon become inured to the exposure, and the inconvenience from this source will not be great, so long as a portion is occasionally wanted for use.

A great advantage in having a portion of the original forests, above that of planting belts artificially, is the *great height* of the screen, the woods in many places being seventy to ninety feet high, and sometimes even more. Yet in frequent instances, where farms have been entirely denuded by the early settlers, belts of fast-growing trees may be planted, and will afford good protection after a lapse of a comparatively few years, and their timber may prove eminently valuable. There is perhaps no kind of tree that promises so much profit as the *locust*, even with the occasional danger of injury by the borer. They will often grow fifty feet high in twenty-five years, if planted closely. Less valuable for timber, but very rapid growers, are the chestnut, the common elm, the silver maple, the European larch, and the Norway fir; with some of these on rich lands, screens thirty feet high may be had in ten years. The silver poplar exceeds all in rapid growth, but its wood is worth but little.

An important advantage, to be *occasionally* derived from shelter, has not been mentioned in the preceding remarks. Farmers who are familiar with the different appearances of *rust* in wheat, are aware that although it often attacks the grain crop in patches with various degrees of severity, affecting most those portions which grow on low and mucky lands, yet at other times and in its most virulent form, it seems borne on the wind, and often destroys thousands of acres on all kinds of soil in one sweeping blight, without the escape of a tenth part of the whole. Perhaps one of the most destructive instances of this sort occurred in northern Indiana in 1840. Early and late sown, upon every grade of soil, on hill or dale, woodland or prairie, all was affected. *In sheltered situations in woodland, it was least injured.* Another instance occurred many years ago in western New-York. We are informed by Isaac Hathaway, of Farmington, Ontario county, (who first suggested to us the plan of leaving belts of wood, in clearing,) that out of two hundred acres of promising wheat which he then had growing, all was completely destroyed *except those portions sheltered by woods*, the total loss being four or five thousand dollars—most of which he believes would have been saved had his land been protected in the manner we have described.

All the preceding remarks are intended to apply to those farms which are nearly level, or moderately rolling or hilly, and which have not an excessively broken surface. In some cases, lands may be situated in deep valleys or on the sheltered sides of high mountains, where of course this treatment cannot apply. On our western prairies, where the severe and constant winds are found to be a most serious evil in many respects, and a large drawback on successful farming, there is no question that these effects might be astonishingly softened by artificial timber belts, which a very few years on a fertile soil, would amply furnish. We have known an ordinary English thorn hedge, which was allowed to run up without shearing, some twenty feet or more in height, to shelter and save from winter-killing, a crop of wheat as far as its influence extended, while beyond this the grain was nearly destroyed; yet this narrow hedge, only a few feet in thickness, formed a very imperfect screen when compared to a mass of trees several rods in breadth.

Seasonable Suggestions—Muck and Draining.

The present drouth is making heavy inroads into the profits of the farmer. For severity it is in many places quite without a parallel during the present age of men. Pastures look browner than after the latest November frost—the corn crop had been so severely checked that some farmers long since plowed it up to sow buckwheat,—and now they are about to plow up the buckwheat to sow wheat. Cattle have already began to consume the fodder intended for next winter's use. But a single year of loss should not dishearten enterprising and thrifty farmers, among so many in succession that give abundant products, and especially should they look about them to see if this unusual state of things cannot be turned with peculiar advantages to profitable account. We shall furnish one or two suggestions of this character, and the practical farmer will doubtless think of many more.

Every observing cultivator has had an opportunity of seeing this year the great advantages of "high farming"—or in other words of deep tillage, high manuring, and thorough management. *Deep and rich soils* suffer incomparably less than others. We have now crops growing on land worked a foot or more deep with subsoil and trench plow, and well manured, that grow with great luxuriance and appear to hold the drouth in sovereign contempt. Other land plowed in the ordinary manner, is unable to retain the moisture, and the plants are perishing. In other cases, a copious application of *manure, well mixed* with the soil, has imparted such early vigor to the crops, that they have in a measure grown beyond its reach. *Seasonable attention*, has again obtained signal advantages. Oats, sown almost at the departure of the winter's frosts from the soil, have given an abundant increase, while some that have been sown out of season, will not be worth cutting—if indeed they can be cut without a pair of fine scissors,—to say nothing of raking with a pocket comb. Now, we know that all these points of good farming and good management will not wholly avert the evils of drouth, but they will certainly greatly mitigate their severity. We therefore earnestly commend *good farming*, as one of the best means for preventing similar disasters in future, even if an occurrence of like severity should not happen. Drouths of some magnitude are met with every few years, and should be guarded against by those who wish to insure uniformity of profit.

There are certain actual operations for which the present season is peculiarly adapted. High cultivation cannot be given to land without the assistance of abundance of manure,—and this abundance is very largely promoted by securing at the proper season a good supply of well dried peat, muck, or turf. Peat or swamp muck is, when wet, more than five-sixths water; and therefore if dug and carted in winter or at any wet season, the work is attended with a vast amount of unnecessary labor, in the removal of so much water. At the present time many muck swamps are comparatively dry, even among those that have never been drained, and which are commonly inaccessible on this account. Large masses might now be thrown out into heaps, and protected from the weather, so as to become well dried for winter application.

Those who do not enjoy the benefit of swamps, may secure supplies for a similar purpose from low, rich, wet pastures, or from wet waste grounds, not otherwise of much value.

The present unusual season also affords great facilities for draining swamps and marshes. Ditches may be cut through places which from their usual wetness, would be attended at other times with double or triple the labor now required. Light, dry muck may be shovelled out with great rapidity, but when soaked with water, it is not only performed with greater labor, but the flowing in of water renders the work especially disagreeable. Every farmer who possesses low, wet, worthless or poor land, should seize the present opportunity to give it a thorough draining. We could give instances almost without number where lands of this character have been increased more than ten fold in value by efficient ditching, one or two years crops in some instances fully repaying the cost of the whole operation. The product of such land was originally flags, sedge, and other worthless growth; when made dry, the most luxuriant crops of timothy took their place, and when a portion of upland soil has been spread over the reclaimed muck, the addition of clover has been quite successful. Such land has also afforded the finest crops of corn; but where the soil is nearly clear muck or peat, and consequently more liable to frost than more compact soils, it has been found necessary to plant a little later, so as to escape the frosts of spring, and to use a sort ripening early so as to avoid those of autumn.

Open drains are required when a large amount of water flows off in the wet season. Such drains should be furnished with sloping walls of stone if practicable, to prevent the banks settling down—a very common cause of failure in open drains through swamps. Such channels as this are only needed as a main or central outlet. All the smaller may be covered. If *tile* are used they should be supported beneath by being laid on a plank or slab, and be covered with a portion of brush laid lengthwise, to prevent their settling out of place. But in many instances *brush drains* will answer every necessary purpose. These may sometimes be made with almost incredible cheapness, by using the brush-cleanings from the land—it being only necessary to deposit them with the butts pointing down the current, and with the branches and leaves at the top—which diposition is effected by simply beginning at the upper end of the drain and working downwards—treading the whole down with the feet, and covering with soil, after having inverted a coat of turf or tussocks. Brush drains will last many years. If much water is expected to flow through them, the addition of two large poles a few inches apart may be best, the brush being laid diagonally across them.

Drained swamps and marshes are often difficult of tillage at first, in consequence of the great number of hard knots or tufts formed by the roots of larger growing ferns. Some of these may be cut off by a sharp paring-plow; others can be only removed with a spade ground sharp. Those which cannot be reduced by being deposited in successive layers in the manure heap, should be piled in a heap, and when dry, reduced to ashes by burning.

Gypsum on Wheat.

Messrs. Editors—Will you or some of your experienced correspondents, inform me of the probable effect of sulphate of lime as a top-dressing on wheat in the spring? Please state the quantity used per acre, and the increase of wheat resulting from such application. A Subscriber. *Cedar Fields, Isle of Wight Co., Va.*

As a general rule, it is impossible not only to give the precise increase per acre, but to say whether there will be any increase at all, by the application of any special or specific manure, as for example sulphate of lime or gypsum, without trial in each region or neighborhood. In some places, and especially on the clover crop, its effects are wonderful—in other places, of little value. We have scarcely ever found an instance where the spring application of gypsum has benefitted the wheat crop—it may, however, on some soils. But as it commonly helps the growth of clover, it is best to sow it on wheat;—as the clover crop of course always follows wheat under good management. Our correspondent will find on page 198 of the third volume of the Country Gentleman, and on page 145, current volume of the Cultivator, a communication from D. A. Bulkley, of Williamstown, Mass., giving the results of many experiments with gypsum on wheat, and particularly of its very successful application when sown in autumn.

Inquiries.

I have, for a few years past, put a solution of hen-dung on my melon plants, to keep the bugs off. I wish to know the proportions of dung and water that should be used, and how long it should be allowed to stand before using. I planted some melons late, this season, and as they were coming up, I went over them with the above preparation, and it being as I supposed too strong, it appeared to prevent their coming up in the hills where they had not already appeared.

Are vines, and crops generally, injured materially by being hoed when wet with rain or dew? (1.)

Can you tell me what is the best work, partially or wholly devoted to ventilation of dwellings? (2.)

Is there any cheap way to obtain a good supply of water in low ground in pastures, for stock, in time of drouth? (3.)

We had a sucking calf *tied* under an apple tree that bore very sour green fruit, and it caused the diarrhea very severely. Would it be safe to let young calves run in a pasture, of not more than one-quarter of an acre with 3 or 4 large bearing trees in it, when the apples were green? A Subscriber.

(1.) Crops are not injured by cultivation in wet weather, unless the soil be clayey and so wet as to be worked into an adhesive mass like mortar, or so as to make it harder by subsequent drying.

(2.) Downing's "*Country Houses*" contains a chapter on ventilation with many valuable suggestions. Allen's Rural Architecture has likewise some useful remarks. If we remember correctly, (for we have not the work at hand,) Wightwick's Hints to Young Architects also contains something on the same subject. In adopting Downing's views, one of his errors should, however, be guarded against—that is, that stoves poison the air—an error that many others who cannot think for themselves, have implicitly adopted. Downing held that "the air that passes over the surface of hot iron becomes loaded with the vapor of arsenic and sulphur, which that metal, highly heated, constantly gives off." How is *iron*, a simple substance, to give off constantly these two different and distinct substances? Suppose, however, the iron to be not quite pure, and to contain a ten-thousandth part of sulphur, and a hundred-thousandth part of arsenic, how long will they "*constantly*" pass off, and fill the air of a room, and never be consumed!! Great men sometimes indulge in sublime nonsense,—and our correspondent will of course guard against this error, in reading the chapter on ventilation in the *Country Houses*. A stove-room should, however, always be freely ventilated.

(3.) Water is obtained for cattle from springs, wells, roofs of buildings, outlets of deep ditches, and natural streams. It may be pumped up with a chain pump by hand; by a water-ram from a stream, or by wind-power from either. Our correspondent knows best which of these sources of water he has, and can judge best which mode of elevating will be most applicable. A barn roof will commonly afford water enough for a herd of cattle, if the cistern is made *large enough* to hold its rain water, which is scarcely ever the case.

The other questions we cannot answer from personal knowledge—will some of our correspondents do so?

Reclaiming Wet Lands.

Mr. Tucker—I have a "Beaver meadow," which is almost of no value. Its subsoil is a blue clay, and is overflown in the spring, and in the summer cracks badly, and grows up to weeds and bulrushes. I am a new beginner at farming, and would like your advice, (or that of some of your excellent correspondents,) *how* to make it productive and profitable. Freshman.

We take it for granted that there is a good layer of decayed vegetable matter upon the blue clay subsoil; and if so, our correspondent has only to give the ground a good thorough underdraining, (for which we have given directions at length in former volumes,) laying the ditches at regular intervals so as to render the whole as dry as the driest upland, and it is then ready for the commencement of cultivation. It should be plowed at a proper depth, which depth can be only determined by a personal examination of the effects, and of the depth of the surface soil and nature of the subsoil,—stable manure with some ashes applied,—and then sown to grass, or planted with corn or potatoes.

Substitute for Guano.

Messrs. Editors—What shall we substitute for guano? In my answer to this question, as found in the Country Gentleman of Aug. 10, I proposed urine not only as a substitute for guano but every way equal to it, in all the elements of fertility, for though deficient in phosphate of lime, it is much richer in the elements of ammonia. I now, in the second place, propose *ashes* as another important substitute for guano. Ashes, though destitute of the elements of ammonia, are richer in all the salts that constitute a rich manure, than guano. To prepare, then, a universal fertilizer, equal to the best guano and superior to any of the phosphates, superphosphates or artificial guano, prepared by Prof. Mapes or any other American Prof., I would propose to the farmer to make a compost of his barn-yard manure and ashes. And when I say barn-yard manure, I include the *urine* with the solid. In this compost, I would also put the excrement of the family, with all the waste suds, and whatever absorbents, may be used to save the urine and the suds. I see not how the farmer could add to the *quality* of such a compost. If he wish to add to the quantity of his manure, he may add any amount of common salt and *air slaked* lime, with smaller quantities of the different salts of potash, soda and magnesia. Such a compost could be made by any and every farmer and mechanic or professional man even, and at a cost less than half that of guano or any of the phosphates or artificial mixtures, now offered for sale. I am almost every day inquired of, relative to the value and use of the different fertilizers, now advertised for sale in the cities, and my invariable answer is, make your own *guano* as I have above directed. Or, at least, exhaust your *own resources* before you purchase foreign manures. J. L. Edgerton. *Georgia, Vermont.*

An Experiment Proposed.

Messrs. Editors—I propose through your most valuable paper (if you deem it proper,) that some of your correspondents try the following experiment, and report the result through the same. The experiment is intended to decide that long contested question—"Do manures *ascend*, or *descend* in the soil, or *remain where they were first put?*"

Take a pail or box, put 9 inches of the soil you wish to experiment on in it; now put about 4 inches of manure—any manure you wish, say *barn yard manure*—on the earth, and over the whole, put a layer of about 6 inches of earth—the same kind as the first mentioned. Expose the pail or box, containing the above, in some open place, that the weather may have full effect on the same—the effect it would have if the soil and manure were in the ground. After a while,—say from 3 months to a year, carefully take off the top soil—mark if any difference, caused by the action of the manure, has taken place in the same—how it has affected the soil, if at all. Now look at the place where the manure was placed—see what action has taken place—whether the manure has dissipated all of itself amongst the soil placed on or over it, or whether any remains, without any admixture of soil—or, as it was put in. Look now to your soil which was placed under the manure. See whether the manure has descended into it or not; and now you will be prepared to form a conclusion.

If the soil placed above the manure, is in any manner changed by the manure, except that part immediately in contact with it—it may be taken for granted that *manure does ascend in the soil.* If you now look at the under soil, and find it also changed by the manure—does it not indisputably prove, that *manure does descend in the soil?* If you find the action of the manure, on both soils, as above, the conclusion come to, is—*That manure both descends and ascends in the soil.* If *neither* the soils were changed, and the manure remained where it was put, we naturally arrive at the conclusion—*That manure remains in the soil, in the place where it is put, until taken away by crops of plants or weeds.* If such is the case, hence the propriety of thoroughly intermingling manure and soil, for the plants to have full benefit from the same; as, if put near the surface, the plants only receive nourishment from it while young, and its roots[*] soon extend far beyond its influence. If put in *deep*, the plants receives no nourishment from it while young,—which they greatly want to give them a vigorous start and strengthen them at the most critical period of their growth. If they have not food (" *manure* is the *food* of plants,") when young, they droop and die; if not when stronger and older, they will soon grow weak and follow the first. Whereas, when manure is thoroughly mingled with the soil, from *top to bottom*, the plants have food at all seasons of their growth, and "multiply exceedingly." Hence, how careful the agriculturist should be in applying manure.

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[*] This does not apply to *grasses.*

If manures remain in the ground where they were first put, they should be thoroughly mixed with the soil to give the plants food *whenever they need it*. If it descends in the soil, it should be put *near the surface*—within three inches—not *on* the surface, as it is certain some of the gases in manure—such as ammonia, will evaporate when exposed to the sun. It also strikes me that rain will have such effect on the *soluble* portion of manure, as to *wash it in the soil*; that some of the soluble portion of manure, which could be *washed* into the soil will evaporate by the action of the sun. For that reason I would not put manure *on* the surface, but a few inches below. Thus the young plant receives nourishment from the manure while it is near the surface, and as the manure gradually descends into the soil, so does the roots of the plant, and in this manner the plant is continually being enriched by the same. It is certain, if manure acts in this manner in the soil, it is most advantageous to the agriculturist who cultivates such crops whose roots run deep—which most crops do. For, suppose manure *ascends* in the soil, it must be buried very deep to last any length of time, and so the young plant cannot receive any benefit from it—(it will also be shown, that the *old* plants receive none unless the manure is buried to a great depth,)—so they must be manured "in the hill," increasing the labor and the expense. As the roots of the plant descend, they soon extend beyond the reach of the manure put " *in the hill*, " and for a time, if the soil does not contain it without the manure put in *for the crop*—the crop receives no nourishment. but, as it is about to "give up," the manure, which was buried deep, ascending and acting upon the plant, it gradually revives and continues for a time, in the middle of its growth— as long it feels the effect of the manure to grow luxuriantly; but alas! the manure constantly rising, and the roots of the plant descending, or even if they do not descend—they soon separate—the manure is off, the plant is drooping.

Which of the three doctrines is right?

To find an answer to the above question, was this experiment proposed.

Will the editor of the "Cultivator" give his views on the subject? K.—*—J.

We think experience has already demonstrated that the more thoroughly the soil and the manure are pulverised and intermixed, the greater will be the influence of the manure upon the crop.

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Liebig, whom some one lately saw at Geneva, expressed his pleasure that he was appreciated in this country by Mr. Mapes. He will get along now.—*Prairie Farmer*.

Weevils in our Peas.

MESSRS. EDITORS—Some days since I discovered these insects in my green peas, from the smallest to the largest, without any exception whatever; in the small ones, I found it in the form of a maggot; but in the larger, it assumed the form and appearance of the weevil.

This may be seen by peeling off the skin which encloses the pea, (this should be done with the fingers;) then you will perceive one or more dark brown spots; each of these contain an insect. I think that if it was generally known that green peas contained these insects, there would be but few grown; therefore I am led to think that there is but a few who know compared to those that do not even suspect it. H. L. TIFFANY. *Southington, Conn., Aug.* 8.

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Seymour's Seed Drill.

MR. TUCKER—Agricultural implements and machinery are at the present time receiving more attention from the public than they have formerly done, and if I am not mistaken are destined to receive far more attention than they now do.

Farmers as a class are slow to adopt anything new, but necessity will compel them to adopt improved implements and machines.

It is but a few years since the horse-rake came into use; now a farmer would almost as quick think of getting his hay without a pitchfork as without a horse-rake. A few years ago it was thought impossible to use a horse-rake on any land that was not perfectly smooth and level; now a farmer would be loth to mow a meadow that is so rough that he cannot use the horse-rake. It is but a few years since the drill came into use; but wherever it has been used, fo far as I am informed, it is universally approved. The great difficulty of getting agricultural laborers that can be depended upon to sow a field of grain as it should be sown, will induce the farmers to try a machine. When they have once used a good machine they will be loth to return to the old tedious practice of sowing by hand. I find that the opinion is almost universal in this section that the drill cannot be used except on very smooth land; in fact it is not two months since I was of the same opinion. I am now satisfied from actual experiment that a drill will work well on any land that a Geddes harrow will work well upon.

About the 1st of July I procured a drill of Mr. P. N. Seymour of East Bloomfield, Ontario Co. I must say that it far exceeds my most sanguine expectations. I have sown several fields of buckwheat with it, (some of them quite rough.) I have turned stones out of the ground as large as two stout men could lift, without injuring the drill in the least. It will sow all kinds of grain and grass seeds better than the most experienced person can by hand. It can be regulated to sow any desired quantity to the acre; it will also sow lime, plaster, bone dust, ashes, &c, broadcast or in drills It will sow grain and grass seed at the same time. It is easily managed, and not liable to get out of order. Yours truly, HENRY KEELER. *South Salem, N. Y., Aug.* 15, 1854.

Improvement of Soils.

Draining and manuring are the principal means which have *hitherto* been employed for improving the condition or composition of soils. Almost all agriculturists—certainly all inquiring and well-informed ones—are now pretty well acquainted with the advantages to be derived from the above-named methods of improvement, and are thoroughly convinced that all judicious expenditures, either in the way of draining or of manuring, will or may be made to pay. The agricultural community do not need great additions to their knowledge on these points. But there is a method of improving soils, to which the attention of farmers has not been, as yet, much directed. We refer to that method which consists in adding to soils those *earthy* substances in which they are deficient. Some little has been done in this way in the case of gardens; but in the case of fields or plow-lands, very little has been attempted, principally, we presume, from the generally prevailing opinion that labor expended in this manner "will not pay."

This opinion we are inclined to think an erroneous one in many cases. Where labor is scarce and high it may be true; but where there are quite a number of boys in a family and several teams on the farm, and work not crowding in the fall and early part of winter, we think that this opinion may stand in the way of making some additions to the too sandy, too clayey, too mucky or too something else soil of a field, which would render that field much more productive, causing an increase in the crops from it for many years, which would amount to a large percentage on the cash value of the labor expended on it. From what we have witnessed in the case of some gardens and some patches for corn-culture, to which sand, meadow muck and composts of various kinds had been added so as to alter the composition of the soil very much,—as, for example, changing a hard clay, almost all the season too stiff to be worked with hoe or otherwise, into a loose, friable, dark-colored loam—we are very strongly inclined to the opinion that, in many cases, as when labor is not extra expensive or when good markets are not remote, a large outlay in making needed alterations in the composition of soils would be better than investing the money at an interest of 10 per cent. As small experiments of this kind, comparing the outlay with the increase of products as far as that can be done, would be the most likely way of banishing erroneous opinions, and of leading to the general prevalence of right ones, we would urge those who can spare the time and labor at any time from this date till the setting in of winter, to make trial on some small patch of garden, meadow or corn-ground. Let clay, clay marl, sand, gravel, meadow muck, &c., be drawn out upon the soils which need such additions; let these additions be spread equally over the surface in the spring and the results carefully noted. These results will not consist wholly in increased productiveness of soil, but there will be, besides an increase of crop, a greater facility and pleasure in cultivation, an opportunity of raising crops for which the soil was formerly unsuitable, and, probably, a more obvious and ready return from the application of manure.

Minute details and specific directions are scarcely admissible on this subject. Some allowance must be made, and some variation in the mode of procedure according to the special wants of the soil, and especially according as this or that addition to it can be had within a short distance. In general, however, the application most likely to be beneficial may be determined by attention to the following principles. Light sandy and gravelly soils, upon which, perhaps, wheat cannot be raised to any advantage, are benefited by additions of clay, clay marl, peaty earth or meadow muck, or a mixture of all of these in a compost with stable and barn manure. Clay soils, again, are benefited by additions of lime, sand, gravel, loamy sand, and peaty earth. Any of these separately, or a mixture of several of them will alter for the better the composition of such soils, and render them more friable, fertile, and easily cultivated. Upon both these kinds of soil, and indeed upon almost every variety of soil, peat earth acts favorably. It should always form a part of any mixture which is added to a soil, if it can be had conveniently.

To these general directions we will add a brief account of two experiments, of the kind we are recommending, which have fallen under our observation, and from the details of which a hint or two may be gleaned for the guidance of those who are disposed to continue experimenting on this subject. In the first case, the spot most convenient for a garden on a new farm, was one of hard, stiff clay. An attempt was made during the first year to make the soil of this garden more friable and loose by plowing in a very liberal supply of long or undecomposed manure. This, however, seemed to have little effect. Next year leached ashes were spread freely upon a part of this clay garden, perhaps two inches deep, but with very little effect in making the soil looser, or more capable of being hoed in warm dry weather. During the fall or early winter of another year enough of meadow muck was drawn upon the garden to cover the whole surface to the depth of about two inches. This was intimately mixed with the clay to the depth of 8 or 9 inches the first year, by spading, raking, &c., and from that time to this, that soil has had quite a different appearance, has been much more productive, never gets baked, compact or hard, and admits of the weeds being pulled up with much more ease than formerly. In the other case there was a peaty meadow and much clay soil upon the farm. Near by, however, was a sand hill, from which could be taken any quantity of pretty fine and pure sand. In the fall of each year, for quite a term of years, enough of sand was drawn from this hill to cover a pretty large barn-yard to the depth of 5 or 6 inches. This was spread out evenly with the hoe so as to be a good soft bed for the cattle. Being fed around this yard and sleeping in it at night, almost all the droppings of the cattle and all the urine fell upon this sandy bed of the yard. When the surface became unsightly and so that the cattle could not readily find a clean place to lie down, the plow was taken out and run through this sand, and a new, fresh, clean surface turned up. Such was the mode of management during the winter. In the spring, at convenient times, this sand was all hauled out upon the farm, sometimes upon the low meadow, but generally on the upland grass land. From cart or wagon two men, one at front end and the other at the hinder end, scattered it as far as it would go. The natural meadow became gradually less mucky, and more fit for the growth of herds grass and subsequently of crops of corn. The clay land became more loose and friable, and when the dressing did not extend all over the field to which it was applied, the difference in the color and growth of the grass, and in the amount of the hay was quite observable. One field which had more of this dressing than any other became changed from a stiff, compact clay to a loose, friable clayey loam, and, with a dressing of meadow muck from the cleanings of the ditches, assumed a dark appearance resembling those rich low soils which abound in carbonaceous deposits. These fields can now be plowed or hoed at times when, as formerly, they would have been hard and compact almost as a brick.

In both the cases referred to it was thought that the outlay was a fund well laid out—yielding a very satisfactory interest yearly.

Mediterranean Wheat.

Messrs. Editors—Among the several varieties of wheat cultivated, it is a matter of the greatest importance to know which is the most profitable kind to raise, taking every thing connected with it into account. Mr. A. Y. Moore, well known as an intelligent and enterprising farmer, of Schoolcraft, Mich. has communicated to his agricultural brethern, in the Aug. No. of the *Michigan Farmer*, some of his experience as a contribution towards the determination of the question above named. Seventeen years ago he procured about a pint of Mediterranean wheat from New Jersey, and has been so well satisfied with it from year to year ever since, that he now raises no other kind. Among the advantages of this kind of wheat Mr. Moore names the following:—It has always, without exception, proved to be more productive than any other kind; it makes good flour and a good yield; it is not at all affected by the fly which is becoming so destructive to some other kinds; it ripens early; and, lastly, it has never been affected with rust nor smut. The bread made from the flour of Mediterranean wheat, it is pretty well known, is not so white as that made from the flour of some other varieties; but Mr. M. thinks this bread is decidedly better.

Among the disadvantages attaching to this kind of wheat there is but one of any importance. Most buyers will not pay as much for it per bushel as they do for white wheat. Mr. M. thinks that this objection will hold good only where there is but little of it raised, as millers do not like to mix it with white wheat on account of its darker color. He adds that nineteen-twentieths of all the wheat raised on Door Prairie, Indiana, is of this kind, and that the farmers there find no trouble in selling it, and at fair prices. Mr. M. says he would prefer to raise it, however, even if he were obliged to sell it at 10 per cent. less than most other varieties.

Mr. Moore has recently floured a quantity of this wheat. "The yield was very good and flour excellent." He thinks that 100 lbs. of the offals is worth as much for any kind of stock as 100 lbs. of oats.

Perhaps some of the readers of this may have some experience on this subject which might be of *use* to the farming *public*. A.

How to Use Swamp Muck.

Mr. Tucker—What is the best mode of using swamp muck, or is it really worth any thing at all? I have a large pond near my barn, from which I can obtain any amount of muck. I have several times carted out a considerable quantity of it, but have never been able to satisfy myself that it would pay. Several years since I spread a number of loads on a dry sandy piece of land, but could not perceive any effect at all from it. Any information in regard to the best way of using it, through the columns of the Cultivator, would oblige. J. Hurlbut. *Gales Ferry*

We have occasionally given in back numbers of this journal, directions for the intermixture of swamp muck with stable manure, for spreading upon land. If the present drouth continues, we would recommend our correspondent to cart out on dry ground, all the muck practicable. If he has now a quantity of stable manure on hand, he may make a large pile of compost near the pond, by placing the muck and manure in alternate layers, each only a few inches thick,—the thinner, the more perfect will be the intermixture. There may be twice as much muck as manure; and if he could sprinkle over, say a twentieth or so, of fresh or leached ashes, all the better. Such a pile as this would form a most valuable compost. If the layers are very thin, carting and spreading will intermix it sufficiently.

If no manure is now to be had, cart out the muck into heaps to dry, and cover it with long straw, slabs, or boards, to prevent its becoming soaked by fall rains. In the winter, it will then be light and easy to draw, will not freeze into lumps, and may be spread over cattle yards to become mingled with the droppings, or may form compost heaps by successive layers as just described. The drier it has been kept, the greater will be the amount of liquid manure it will absorb,—the richer it will be,—and the greater will be the saving it will effect.

Muck, applied unmixed directly to land, does not usually produce a striking effect—sometimes its benefit is very small. There is a difference in the quality of the muck—and when applied to land already well supplied with vegetable matter, it is of course only taking coals to Newcastle. The effects however, last many years. Doubtless, if our correspondent had *measured* accurately the results of his experiment, he could have perceived more sensibly its advantages.

Importation of Cattle.

Messrs. Morris and Becar of New-York, have recently received from England, an addition to their already extensive importations, of which we find the following notice in the Boston Cultivator.

They came in the steamer Hermann, which landed at New-York on the 2d Aug., and are as follows:

Duchess 66—bred by Thomas Bates—rich roan: calved October 25, 1850; got by Fourth Duke of York (10167,) dam (Duchess 55th) by Fourth Duke of Northumberland (3649,) ——(Duchess 38th) by Norfolk (2377,)——Duchess 33d) by Belvedere (1706,)——(Duchess 19th) by Second Hubback (1423,)——(Duches 12th) by the Earl (1646,)——Duchess 4th) by Ketton 2d (710,)——(Duchess 1st) by Comet (155,) ——by Favorite (252,)——by Daisy Bull (186)——by Favorite (252,)——by Hubback (319,)——by J. Brown's Red Bull.

Duchess 66th was purchased in 1853, at the sale of the stock of the late Earl Ducie, by L. G. Morris & N. J. Becar, for £735 ($3675), a larger sum than is known to have ever been brought by any other cow. She is of medium size, for the breed, and is almost perfection in the points aimed at by the leading breeders of Short-horns. A heifer calf of hers, by Duke of Glo'ster, was left in England, being too young for shipment.

Oxford 6th—bred by Thomas Bates—red; calved November 6, 1846; got by Second Duke of Northumberland (3646), dam (Oxford 2nd) by Short Tail (2621),—— (Matchem Cow,) by Matchem (2281), —— by Young Wynyard (2859).

Oxford 6th was purchased at the sale of Earl Ducie's stock, by J. S. Tanqueray, for £215,5s., and was sold by him at the same price to N. J. Becar of New-York. She is a cow of great size and substance, but by no means coarse. We have seldom seen her equalled in fineness and symmetry by one so large.

Miss Belleville—bred by John Mason Hopper—roan; calved Feb. 1853; got by Belleville (6778,) dam (Carnation) by Goldsmith (10277,)——(Crocus) by Petrarch (7239,)——(Violet) by Forester (3825,)——by son of Fleetham (2028,) from the herd of Mr. Whitaker, of Greenholme.

Miss Belleville was engaged of Mr. Hopper by Mr. Becar, last season. She will be a decided acquisition to Mr. B.'s herd, as she possesses a strain of valuable blood which is very rare in this country, and is, individually, nearly a *model*. Her sire, Belleville, was the most remarkable prize taker of any bull ever bred in Great Britain. He took the highest prizes in the class of Short-horns of the Royal Agricultural Society of England, the Agricultural Improvement Society of Ireland, the Highland and Agricultural Society of Scotland, the Yorkshire Agricultural Society, and after receiving all these honors, capped the climax by carrying a sweepstakes of £70 ($350) at the show of the Highland Society at Glasgow in 1850, against twenty competitors.

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Stoppage of Milk.

In your August number of the Cultivator, N. N. inquires for a cure for a stoppage in cow's bags. I have never known an instance such as he describes, until within ten years, since which time I have had three cows affected in precisely the same way, and have known of two other instances in cows belonging to my neighbors, all of which have been cured in this way: Take both hands to milk one tit. With one, press the milk down from the udder, and with the other milk it out, applying as much force as the cow will bear with both hands. The difficulty will gradually diminish, if sufficient force is applied in milking, until in two weeks an entire cure will be affected. T. L. Hart. *West Cornwall, Ct.*

Cost of Making Pork.

The following estimate of the cost and profit of pork raising in Ohio has been furnished me by N. Hunt, a very intelligent farmer, and although not, like an Almanac, calculated for all meridians, may serve as a basis for other regions as well as this.

He estimates the cost of the pig, at two months old—for keep of the sow, &c., as equal to two and a half bushels of corn, or 63 cents. The next *four* months at pasture, as equal to 2 bu. corn or 50 cents. The next 6 months—the first winter, as equal to 3 bu. corn, or 150 cents. The next six months at pasture, as equal to 6 bu. corn, or 75 cents, and the cost of fattening as equal to 16 bu. corn, or 400 cents, making the entire cost $7.38.

The offal will pay the expense of slaughtering; and under this mode of feeding, the hog will weigh about from 275 to 300 pounds, worth on the average 3 cents per pound, so that the farmer will get from nothing to $1.62 for the labor of rearing each pig, provided he does not lose any by sickness or by accident; and he also saves the manure they make, to enrich his farm.

Each reader of the Country Gentleman, can judge if the above estimate be fair, and if he can make pork raising profitable. C. *Cincinnati, Ohio.*

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Cure for Scratches in Horses.

Take good fifty per cent rum, put in as much copperas as will dissolve, and wash the horse's feet and legs as far as you can feel any bunches, two or three times a day. It will cure in a few days. I am no horse doctor, but always doctor my own, and have as few lame as my neighbors, who employ a doctor. I have recommended it with perfect success, where other remedies have failed. The scratches, is something you must kill, before you can heal so that they will not break out again. Copperas and rum will do it Grease the legs a little after you are sure the scratches is killed. A Farmer. *Littleton, N. H.*

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Sale of Ayrshire Cattle in New Brunswick.

Mr. Gray's sale of Ayrshire stock took place at Oak Park, near Frederickton, N. B., on Friday the 21st ultimo. In addition to farmers from different parts of the Province it was attended by agents from the Central Board of Agriculture of Nova Scotia, and the Digby Agricultural Society of the same Province; the former of whom bought to the extent of 7 animals costing $400.

The bull " Jock the Laird," and several of the cows were withdrawn for want of sufficient competition, but the former was afterward sold by private sale to the Nova Scotia Agricultural Board, at the reserved price of $120. Some of the best of the bull calves sold at $40 each, and the yearling and two year old heifers from $36 to $60. On the whole the sale was not remunerative to Mr. Gray for the expense he has been at in importing and keeping his stock pure—a circumstance due, partly, to the farmers of New Brunswick not being yet sufficiently forward to appreciate the benefit of improved stock, and partly, to Mr. Gray not having offered for sale the class of animals most sought after. Yearling bulls and two year old heifers, are what the farmers in this country seem most to run upon for breeding from, a fact Mr. Gray and others raising stock for this kind of sale, would do well to keep in mind. A CORRESPONDENT. *New Brunswick, Aug.* 20.

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Heaves in Horses.

MESSRS. EDS.—If you or your subscribers, know a cure or preventive for heaves in horses, please state so in some number. DAVID STEWART. *Strabane, C. W.*

Heaves (*broken-wind* of the English,) is a disease caused by poor, innutritious and dusty or musty food, working hard on a full stomach, irregular feeding and working, &c., superadded to a hereditary predisposition. The prevention, is good and nourishing food, plenty of oats regularly given, water in moderate quantities at a time, green food and especially carrots, and avoiding hard work with a distended stomach.

There is no cure for the heaves.

But its symptons may be mitigated, and the disease in a great measure *suspended*, by the same treatment as for its prevention, just stated, and especially by *always cutting the animal's fodder and giving it wet, with meal*, and never more than a small pail of water at a time; at the same time taking care that he cannot eat his bedding, by giving him a short halter. Giving *ginger* only affords temporary relief.

If our correspondent will turn to p. 105 of the first volume of the Country Gentleman, he will there find a humorous and instructive article from the pen of HENRY F. FRENCH, entitled "How I bought a horse, and how he had the heaves," which will afford some valuable hints on this subject.

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Farmers should Save their own Clover Seed.

[The following practical directions on saving the seed of clover,—a crop on which the fertile condition of the farm, and the growth of fine crops of wheat, next to manuring, most depends,—are worthy of the attention of our readers at the present time, when the period of ripening the seed is approaching.]

The quantity of clover seed sown the present season in Kentucky is probably greater than in any former year. The quantity reported in the daily papers, as received by the steamboats at this port, between the months of November and April, is 11,800 bushels This it is presumed, will hardly equal one-quarter of the amount that has found its way into the State at other points, so that we may safely estimate the entire receipts of clover seed into Kentucky at 50,000 bushels, which, at an average price of $5.25 per bushel, amounts to the sum of $262,500. This seed is chiefly the product of Pennsylvania, Ohio and Indiana, but by far the largest portion is from Ohio.

From the Patent Office report for the year 1851, we learn that the quantity of clover seed saved in Ohio in that year exceeded 100,000 bushels, which, at the average market price, brought a return to the farmers of that State of over half a million of dollars.

The estimate of the entire annual crop of clover seed for the seed-growing States of the Union is set down at 1,000,000 bushels—worth over $5,000,000.

With proper machinery for gathering and cleaning the seed, it is one of the most profitable crops grown. Indeed the labor of harvesting and cleaning constitutes the whole cost of production, as clover necessarily enters into the system of *rotation* of the crops of every good farmer, and in securing the seed by the most improved methods nothing is removed from the land but the heads of the plant, leaving all that remains to enrich the soil.

The spring growth may be either cut and cured for hay, or it may be pastured by cattle; the second growth of the season being the most productive of seed. All that is required for saving and preparing the seed for market is a Seed Harvester and Huller. One of the most complete and effectual clover and timothy seed harvesters has been invented and patented by J A. Wagener, of New York. This machine consists of a simple frame or box mounted on wheels, in front of which is a cylinder, set with spiral knives, acting in concert with curved spring teeth, in combination with a straight knife which forms a perfect shear, and severs the heads from the stalk, which are at the same time discharged into the box, the cylinder being guarded by an adjustable guard plate, allowing the heads, and the heads only, to pass to the cylinder, leaving the stalks on the field. The teeth being made to spring and vibrate, not a particle of clover, however stalky and thick, can possibly escape being cut, or allow the teeth to become clogged. This machine is so constructed that it can be made adjustable to the height of clover and timothy.

With the aid of one horse and a boy, this machine will harvest *twelve* acres per day.

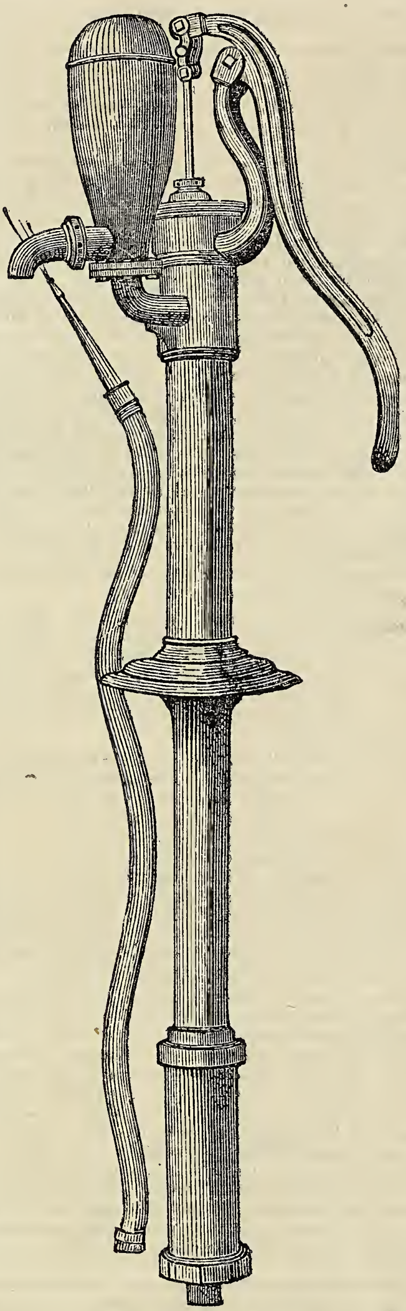
Of Clover Hullers there is a great variety, more or less perfect in their operation, which can be procured at a cost of from $30 to $100. Some of the cheaper ones, however, are inefficient and such as we would not advise our farmers to procure. Crawford's patent Clover Huller, now extensively used in Ohio, is probably as good as any.

When but a small quantity of seed is required to be hulled, farmers sometimes use the ordinary threshing machine. In doing so they nearly close the front of the feeding space with a board, leaving only a small opening sufficiently large to crowd in the chaff. The back side is also closed, except an opening at the opposite corner from that left for feeding. The spikes in the cylinder, being set spirally, force the seed from one side of the concave to the place of discharge on the other, thus removing the hull. This operation, however requires to be repeated several times, in order to thoroughly separate the hull from all the seed.

When a farmer wishes to save seed only for his own sowing, it is not essential that it be cleaned, as it will vegetate equally well when sown in the chaff. Every farmer may gather what seed he wishes to sow by a cheap and simple machine, which with the use of a few tools may be easily constructed, as follows: Make a box, say three feet wide, four feet long, and one foot deep, with the forward end left out. This should be placed on runners, about nine inches wide forming a kind of sled; teeth made of hard wood, about fifteen inches long, one inch thick and one inch wide at the top and half an inch wide on the under side. These should be placed about a quarter of an inch apart forming a kind of comb by which the heads are gathered.

A field of clover properly managed will yield from 1½ to 3 bushels of clover seed per acre. At an average of 2 bushels per acre, 20 bushels and upward may be gathered in a day with the improved seed gatherers, and much more than that quantity can be hulled and cleaned with the same, of the best machines.

In many of the clover-growing States, a very profitable business is carried on by persons providing themselves with seed harvesters and hullers and traveling from farm to farm and gathering and cleaning the seed on shares, giving the farmer one-third to one-half the crop.—*Louisville Journal.*



Engine Force Pump.

The above cut represents an "Engine Well Pump," manufactured by Cowing & Co., Seneca Falls, N. Y., and furnished by them at $18, including hose and discharge pipe. It combines, say the proprietors, the principles of atmospheric pressure or suction with the Force Pump, and having an Air Chamber connected with it, is calculated to throw a constant stream. It is adapted not only to the ordinary uses of a Well Pump, but also to the washing of windows, buildings, and vehicles, and the extinguishing of fires. Having an Air Chamber it combines all the principles of a Double Acting Fire Engine! With three feet of hose and discharge pipe, water can easily be thrown over a two story building, and with sufficient hose can be carried over the entire premises. This we deem one of the most practical and useful improvements of the day, since every house in town or country may have not only the conveniences of a good Well Pump, but at the same time be always supplied wtih a first rate Fire Engine. The working Piston of this Pump is some 3 feet below the platform of the well, where is a small let-off which entirely prevents its freezing, if the well is covered tight.

Directions.—When used as a Common Pump the hole in the top of the Air Chamber should be left open; when used with the Hose it should be perfectly tight.

PREPARING POULTRY FOR MARKET.

We have often noticed the careless and slovenly manner and little attention paid to the external appearance of poultry offered for sale in our markets; and we have likewise noticed the ready sale and higher price where due regard was paid to have the skin all sound and clean; the breast not mutilated by a long cut, the shrinking skin exposing the drying meat covered with hay seed or chaff; but well covered all over with fat, of a rich golden yellow. Much of the poultry exposed for sale has been through the process of scalding to facilitate the picking; this practice should never be resorted to. It turns the rich yellow of the fat into a tallowy hue, and oftentimes starts the skin, so that it peels off, unless very carefully handled. No cut should be made in the breast, all the offal should be taken out behind and the opening should be made as small as possible; the inside wiped out with a dry cloth, but no water should be used to cleanse them. with a moist cloth take off the blood that may be found upon the carcase. In picking, great care should be taken not to tear the skin; the wings should not be cut off, but picked to the end; the skin of the neck should be neatly tied over it, if the head is cut off. Most people like to see the heads of fowls left on—it makes a better show. The heads of ducks and geese should not be cut off.—*N. E. Far.*

Much care and attention is required after the poultry is dressed and cool, and it should be carefully packed in baskets or boxes, and above all, it should be kept from freezing. A friend, who was very nice in these matters, used to bring his turkeys to market in the finest order possible, and always obtained a ready sale, and the highest price. His method was to pick them dry, and dress them in the neatest manner; then take a long, deep, narrow box, with a stick reaching from end to end of the box, and hanging the turkeys by the legs over the stick, which prevents bruising or disfiguring them in the least.

Too much should not be exposed at a time for sale, nor should they be hauled over too often. Appearance is everything with poultry, as well as other articles, and has great influence on the purchaser.—*Bement.*

Poultry-Feeding.—Poultry should be fed regularly until wheat and oats are harvested, as this will prevent them from straying into the fields. When they have once acquired the habit of getting into the growing crops, hand feeding will, probably, not prevent them from straying.

The Drouth and its Effects.

Eds. Co. Gent.—We have had, and are still having, very dry weather—a season which will be remembered as very unprofitable by many farmers. This season has eminently shown the importance of taking time by the foretop, and cultivating the ground thoroughly. Those farmers whose soil was dry enough to plow and sow early, and who pulverized the ground, thoroughly with the roller and drag at the time of seeding, have realized good crops of barley and oats On the other hand where the land was wet and undrained—plowing delayed till May when the drouth came and continued, poor crops were the result.

This season has also shown the great superiority of a clay soil to withstand the drouth. A field which seemed to be the best corn in our town about the first of June, is now the poorest. It is a sandy loam and its stalks are now quite dry and earless or nearly so.

April with us was a wet month, yielding 7. 8-10 inches of rain and melted snow. In May we had 2.82 inches rain and most of that was at the commencement of the month. During the month of June 3.58 inches of rain fell, of which 2.8-10 inches fell in the space of two successive days. One sudden violent shower gave over two inches; of this a large portion ran away into the streams and ditches. July afforded about an inch of rain, and the second day of August we had ½ an inch of rain, since which we have been favored with none. I wish every farmer would have a thermometer, barometer and rain gauge and keep a register of the weather. The cost of the whole would not exceed fifteen dollars. The barometer enabling him to foretell storms and rain, would soon repay the cost. The barometer and thermometer can be purchased in most of our cities and villages, but the ombrometer or rain gauge can be partly constructed at home, to facilitate which I append a description of one recommended by the Smithsonian Institution. It consists of a zinc funnel—two graduated cylindrical glass vessels and a reservoir. It should be placed in an open space away from trees, buildings or any thing which may have a tendency to increase or diminish the quantity of rain which would naturarily fall into the funnel whose surface should be placed about six inches above the ground.

Directions.—Place in the ground a cask or barrel, watertight, the top rising above the ground about three inches; cover it with boards slightly inclined in the form of a roof, which project on all sides beyond the edge of the barrel at least a foot. A circular opening in the middle receives the funnel, the borders of which rest on the board. At the bottom of the barrel to receive the water, is an earthern or metalic vessel with a narrow neck (an ordinary earthern jug will answer) in which is placed the end of the funnel exactly filling the opening. It must contain about three quarts or a gallon. The funnel is fastened by means of two clasps to the board, which must be covered up with sod to make it like the ground itself.

To make the observation, remove the funnel and pour the water from the jug into the large graduated glass cylinder. The opening of the funnel being one hundred square inches, one inch of rain in depth gives one hundred cubic inches of water; and each division of the glass containing a cubic inch of water, each of them represents a hundredth of an inch of rain fallen into the ombrometer. These degrees are large enough to permit us to measure the thousandths of an inch. The divisions of the smaller graduated glass cylinder will measure directly the thousandths of an inch, and it may serve in cases of accident as a substitute for the larger one.

The weather has such an important part in the economy of the farmer, that it surely must be very useful for him to note and foresee its changes. In a word the possession and right understanding of the above instrument will render him weather-wiser and happier, and render his home more attractive. Yours truly, S. B. Buckley. *W. Dresden, N. Y.*

Mediterranean Wheat.

Messrs. Editors—Since sending you an account of the experience of Mr. A. G. Moore, of Michigan, in reference to the different kinds of wheat, and a brief statement of the reason for which he prefers Mediterranean to all other kinds, we have met with some corroboration of Mr. Moore's views in *The Genesee Farmer* for August. Speaking of the attack which the weevil has made on the crop of this year in western New-York, and of the great alarm caused by it, the editor says: "In a recent visit to Cayuga county, where the fly has prevailed longer than it has in the Genesee valley, we found the brown Mediterranean wheat nearly exempt from the attacks of this depredator, while the different varieties of white wheat were nearly destroyed. Plump Mediterranean weighs some four or five pounds more per bushel than either the white flint, blue stem, or Soule's wheat, and the flour of the former is 'stronger'—that is, it will imbibe per 100 pounds, more water, and yield more bread than the flour of white wheat; and therefore, bakers in cities, who sell bread by weight, like it. It has however, a thick hard bran, and the flour is comparatively dark colored." Dr. Lee adds that Mediterranean is better than no wheat, but thinks that farmers in the Genesee valley will rather reluctantly engage in its cultivation. Perhaps the advantages which this kind of wheat possesses over most or all other kinds, and which were stated in our former communication may go some way towards inclining the farmers in that region to make a trial of it.

If any of your readers should have received so much damage from the weevil this season as to discourage them from attempting to raise wheat for next year, but should feel inclined by the statements in this and former article, to venture to try the Mediterranean variety, notwithstanding the common prejudices against it, we would suggest to them that they will find in *The Cultivator* for 1851, several additional statements in regard to this kind of wheat, which will probably be sufficient to turn the scale in favor of making a trial of this early, hardy, sweet, fruitful and every way excellent variety. A.

Treatment, Value and Application of Manures.

Translated for the Country Gentleman by Sam'l W. Johnson,
FROM THE GERMAN OF PROF. WOLFF

Treatment of manure in the yard or dung-pit.—Three points must be attended to in a rational treatment of yard manure.

1. The original virtue of the manure must be almost perfectly retained. 2. The whole mass should be made as far as possible of uniform quality throughout. 3. The process of decay or fermentation should proceed neither too rapidly nor too far; nor should the manure shrink too much in bulk. The importance of both the first mentioned qualities is self-evident, and in reference to the third point, it need only be remarked, that while the nature of the soil and climate are often to be considered in determining how far manure should be rotted; yet generally, a medium between the two extremes is to be recommended.

The manure must be spread evenly as soon as removed from the stable. If it be left with an irregular surface, with heaps here and there, the drying and fermentation will not proceed uniformly, and the quality will be different in different places. Care should be taken that all loose material, be well stamped down, as in such places the rotting goes on with great rapidity and loss may ensue. Also under certain circumstances in cavities and unpacked litter, mouldiness appears which extends to the neighboring manure, and it becomes lumpy and balls together. In these portions of the heap further decay is thus checked, and the uniformity of quality is spoiled. Experience has also proved that such mouldy manure acts injuriously when applied to fields just before sowing.

In cases where dung has become quite mouldy, it is often necessary to overhaul it, and pack it down anew in layers, each of which should be drenched with the liquor of the cistern. Between them layers of muck may be interposed, or the whole may be mixed up as a compost. It is to be recommended that the different kinds of manure be well mixed together; so that for example, horse-dung which heats so readily, be interposed in thin layers between the cattle dung, and not left to accumulate in one place. Especially important is it that the yard manure be thoroughly trodden down. By this means the access of air, and consequently the too rapid fermentation of the mass, as well as loss of volatile ammoniacal matters is hindered. To accomplish the proper packing of the manure, nothing is better than to allow the cattle to spend some hours daily upon it. The heap must in this case not be kept too wet, and it is well to spread a little straw upon it, in order to attract them to it, and induce them to lie down upon it. This is especially to be recommended when the manure is transferred from the stable only at intervals of 14 days or thereabouts. In continued dry and hot summer weather, the surface of the manure loses its moisture, and air finds access; so that shortly too rapid fermentation sets in, and ammonia escapes, as is indicated by the smell. BAILEY found that manure from the stall which contained but 56 pr. ct. of moisture, evolved as much gaseous ammonia upon drying at the temp. of boiling water, (212°) as would be equal to ¾ of a lb. for a load of 1600 lbs. of fresh manure. In the same amount of horse-dung, he observed a loss by drying of more than 1½ lbs. This loss is much greater when a powerful manure in an advanced stage of decomposition, is allowed to dry in free air. I found for example that sheep-dung which had been collecting in the stable during three summer months, and contained 71 pr. ct. of moisture, lost ⅓ of a pr. ct. of its weight of ammonia in being dried at 212°. This calculated on a load of 1600 lbs. is nearly 6 lbs. having (in Germany) a value as manure of 75 cts. In the dry dung remained ⅔ pr. ct. of ammonia, so that by drying, it lost ⅓ of its nitrogen in the form of ammonia.

The loss by drying is of course prevented by maintaining a certain degree of moisture in the manure. To accomplish this the contents of the cistern formerly described are intended to serve. This liquid should be pumped up—and by means of movable troughs distributed over the whole surface of the heap, and indeed so often and in such quantity, as the heat and drouth make necessary. The whole art of preparing a good yard manure, consists in great part in a careful regulation of its amount of moisture, for this must be neither too great, nor too small. Where too much moisture is present, it is liable to become cold, and sour; and humus-like bodies are formed which act unfavorably upon vegetation: while in absence of sufficient moisture the ammonia escapes into the surrounding atmosphere. By maintaining the manure moderately moist throughout its entire mass, a fertilizer will be produced, preserving almost entirely the original virtue of the manure, and in a form well adapted to promote the growth of crops; and this without employing chemical fixing-agents, as plaster, sulphuric acid, &c., whose application on the large scale is often too costly and troublesome. Swamp-muck, peat, brown-coal powder, or any earth rich in vegetable matter, may often be economically employed to assist in retaining ammonia. Whichever material be used, it should be strewed as a thin coating over the surface of the manure, from time to time, during the summer; and be kept moderately moist by occasional *drenchings with* the contents of the cistern."

The application of chemical agents will be noticed in the next article. TRANS.

Lime for Sorrel Lands.

EDITORS OF "THE COUNTRY GENTLEMAN"—Your subscriber J. F. B. of Otsego Co. N. Y. "inquires of some practical farmer, the cheapest, and best mode to pursue with his land, to kill out the sorrel, and make it produce again." He writes, that one neighbor says *sow* lime, another says *sow* ashes, and a third says *mix* the two, with gypsum or plaster, and the sorrel will disappear. We have had some twenty years experience in farming, and in the use of lime and other fertilizers, and think that his neighbors are *none* of them very wide of the mark, provided the mixture is in the right *proportion*, and the right *kind* of an *instrument* (a shovel) is used—for we never in our practice found a man, with a *hand large enough*, to sow lime or ashes, on land that really required such a dressing. That the land of your subscriber is deficient in the first named ingredient, the fact that it is covered with sorrel (which he intimates is natural to the soil,) *we* regard, almost, as conclusive evidence—far more reliable than any of the *five dollar analyses* he could obtain. We can look back to the time when *white-washing* the land, was, comparatively speaking, first introduced in this section of country, when some of our (so called) grass or pasture fields, in their appearance, might almost have induced a stranger to suppose they had been *red-washed;* but the sorrel *now*, has very generally disappeared, and there are few farms in our county (along our public roads at any rate,) that have not been limed once, twice or thrice over.

From our own experience in this respect, we recommend your subscriber to make a free use of lime. If his land has been well manured from the barn-yard, and abounds with vegetable matters he might safely use 100 bushels per acre of shell lime or a smaller quantity of a more caustic kind. We speak of *slaked* lime—and would not recommend him to use it as a dressing for wheat, but think his timothy seed, sown with the latter, or rather just after it, and before the ground has been rendered compact by a fall of rain, would be much more likely to do well. Clover and timothy, generally speaking, are apt to fail with the oat crop, which rather smothers them out, it being liable in strong ground to *lodge*.

We have no doubt your subscriber will find, after the lime has been freely and intimately mixed and incorporated in his soil, the sorrel will gradually disappear—that the lime will neutralise and render harmless the acid, which now abounds, and on which the sorrel in great measure depends for its support and growth, and that when this effect has been produced, as sooner or later it will be (as more or less of lime shall have been used,) his land will *then* be in fit state to produce clover, timothy and other grass. Then perhaps he may find one or two bushels per acre of *plaster*, a good application to his clover early in the spring.

We can hardly refrain to recommend to the notice and perusal of your subscriber if he has not read the work, "Ruffin's Essay on Calcareous Manures." We incline to think that the theory advocated in that work in regard to the use of lime (or calcareous manures) and its effect on acid soils, has stood the test of time—has not been contradicted by facts, as some other theories of a more modern date have been, and that the work is a very useful one, especially to persons about to engage in liming and improving their land.

As J. F. B. seems to have the right kind of a *hand for sowing grass seed*—that is, sows it liberally—we hope in due time he will reap by the same scale or measure, and that one failure will not discourage him. C. W. *Salem Co., N. J., 8th Mo. 25th*, 1854.

Culture of the Strawberry.

Messrs. Editors—In reading the article on strawberry culture, No. 8, vol. 4, I was surprised that one well posted up as the Editor of the Horticulturist, should take such ground, and recommend a course for garden or extensive field culture, in some respects, so radically defective, (or at least so to my mind.) Now I believe that he cannot sustain himself, when he says that strawberries, will generally in beds produce small insipid berries, and of course unfit for market. I will say that as far as my experience goes, it is directly opposite, for I have sold about three thousand quarts this season, mostly Hovey's and many of them were an inch and five-eighths in diameter, and they were grown on beds two and a half feet wide, and averaging a plant to every five or six inches on the bed. I am not an advocate of letting all the runners grow till they have made the bed one solid mat, but do contend that strawberries may and should be grown in beds, because it is attended with less trouble, and vastly more worth can be obtained from an acre, for I have grown at the rate of seventeen hundred dollars to the acre at twenty-five cents a quart, and I know of others doing as well.

And here let me say that I have never protected my beds in winter, or mulched the alleys in summer; nor have I ever had any trouble in selling them, but could to-day engage the next year's crop to any fruit dealer in our market; which by the way knocks down, I think, another position taken by the Editor, which is, that every system of culture which stops short of stirring the soil around each plant is defective. It seems to me perfectly clear that to put out strawberry plants three feet by eighteen inches, would require five acres to get as much worth as can be obtained from one acre of beds properly managed; besides it is no small operation to cut straw to mulch ten or twelve acres. And here I will say that I do not know of a single horticulturist in this vicinity but what cultivates in beds, and I should be willing to have our exhibitions compared with those that are grown in rows.

My advice to those who intend to put out strawberries for field culture, is, to put out your plants as early in April as the ground will do to work, in rows two feet apart, and one foot in the row, and let the runners take possession of every other space until the plants will average one to every five or six inches, and not to allow runners or any thing else to take possession after that. I would not set myself up as possessing all knowledge on the subject of strawberry culture, but have given my experience, which, if good for any thing can be adopted—if worthless rejected. Practical. *New Haven, Ct., August*, 1854.

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Sterling Pear.—We have been favored by Dr. H. Wendell of this city, with samples of this fine summer pear which is said to be a seedling, raised by a Mr. Sterling in the western part of this state. It is of full medium size, handsome, of good flavor, and must be a valuable addition to our list of early pears.

The Housewife.

ELDERBERRY AND GINGER WINE.

Mr. Tucker—On reading the Aug. Cultivator, I see that you are in want of a receipt for making Elderberry wine. With pleasure I send one.

Take three quarts of black Elderberries, when quite ripe, to a gallon of water and four pounds of brown sugar, a little root ginger and a few cloves. Boil the berries and water half an hour—Strain them, and then boil the wine and spice together about an hour. Skim the froth as it rises. When it is boiled, let it stand till almost cold; then add a teacup full of yeast, and let it stand three days. Then barrel it, and let it stand four months, when it may be bottled, with a lump of sugar in each bottle. Cork tight, and keep in a cool place. Age improves it.

I send you another simple receipt for making Ginger wine. Take 4 quarts of water and 5 lbs. of moist sugar, to 2 ozs. of best root ginger—bruise it and boil all together three-quarters of an hour. When cold, add a little yeast, barrel it for a week or ten days—then bottle it with a lump of sugar in each bottle. In 4 weeks it will be fit for use. J. H. Rawlings. *Butternuts, Aug 14th.*

Messrs. Eds.—In your No. 2 Vol. 4, of Country Gentleman, a subscriber calls for a recipe for elderberry wine. An English woman gave me the following, which a trial has proved to be first rate.

To 1 gallon of fruit, add 1 gallon of water, and boil for 15 minutes. Strain off and measure the liquor. Take any kind of sugar, and put 4 pounds to 1 gallon of liquor, ½ an ounce of cloves, 1 ounce of ginger—boil the spice with the liquor, and when lukewarm put in yeast and let it work one day before bottling. Then bottle loosely, and let it stand for a month before using. I have the wine two years old, at which age it is a very refreshing and healthful beverage—truly good. R. J. W. *Sheffield, Ill.*

WHEAT FLOUR, BOLTED AND UNBOLTED.

It is said that there are of nutriment peculiarly favorable for the growth of the muscular system, in every 1,000 lbs. of wheat, about 28 lbs. In every 1,000 lbs. of flour only about 20 lbs., and in every 1,000 lbs. of bran, about 60 lbs. To please the eye and the palate we sift out the most nutritive part of this grain, and seek a substitute for it in the consumption of animal food, &c. There is yet another loss or disadvantage from this rather foolish fastidiousness. The bolted flour will not go nearly so far as the unbolted. If, in a given time, eight persons will consume 40 lbs. of fine flour or the usual product of one bushel of wheat, then it would take a considerably longer time for them to consume that flour with the addition of several pounds of coarser material. This saving from the use of unbolted flour would be greater than just in proportion to the increase in weight of the unbolted above the bolted article, for the former contains the most nutriment. It would be certainly within the limits of truth to calculate that four bushels of wheat would go farther in the unbolted state, than five bushels bolted. This is no contemptible consideration at present prices of wheat and flour. To this may be added the fact that unbolted flour is most conducive to health.

READY RELIEF FOR BEE STINGS.

Messrs. Editors—We have noticed occasionally for a year or more recommendations of an application of liquid hartshorn or *aqua ammonia* to the stings, of bees, wasps, &c. as a means of certain and speedy relief. Though rather slow to put much faith in many of the recommendations and cures of which some old women, with large marvellousness and an easy credulity, seem to have a never-failing supply, we were, notwithstanding, inclined to think favorably of this particular one. Accordingly we had it stored away in our memory to be ready for trial on the first opportunity. That opportunity not having yet occurred, we took the more especial notice of a little item of information which we found in an account of some 'Rambles' which Mr. S. B. Noble puts on record in the Aug. No. of *The Michigan Farmer.* Intruding himself among the bees belonging to some of his kind entertainers farther than they thought was becoming or proper in a perfect stranger, one of them undertook to teach him a lesson in regard to keeping a proper distance, and in order to get this lesson effectually instilled and fixed in his memory, used on Mr. Noble's neck the instrument which Providence has furnished to this little instructor for the purpose of enforcing its lessons about keeping at proper distances. His neck he says, immediately began to swell and to be exceedingly painful. He applied soon two drops or thereabouts of a strong solution of ammonia—the common *aqua ammonia* of the shops—and the relief was instantaneous, the pain abating and the swelling subsiding in less than two minutes after the application, so that he would not have known that he had been stung from any unpleasant sensation then remaining.

If the above article were not at hand we should expect about the same relief from a strong solution of potash, or soda, or saleratus, or from alcohol or camphorated spirits, or muriated tincture of iron, or elixir of vitriol, or any dilute acid, strong vinegar, or other articles powerful enough to cause momentary and rather severe smarting in the wound. A.

GREEN CORN PUDDING.

This is one of the numerous rural luxuries which the farmer has always the power to obtain at small expense. The following is the recipe for making it:—

Take of green corn, full in the milk, twelve ears, and grate it. To this add one quart of sweet milk, one-fourth of a pound of fresh butter, four eggs, well beaten, pepper and salt as much as may be deemed necessary; stir the ingredients well together, and bake in a buttered dish. Some add to the other ingredients a quarter of a pound of fine sugar, and eat with sauce. It is an excellent dish, cold or warm, with meat or sauce; but epicures of the most "exquisite taste" declare for it, we believe, and with the first service.—*N. E. Far.*

A Fine Orchard.

Moore's New Yorker gives an account of the orchards of Austin Pinney, Clarkson, Monroe Co., N. Y., who has for several years past devoted himself to the collection and planting of fine fruit, and more particularly of peaches, for the best varieties of which he has ransacked the whole United States. The editor of the New Yorker states that he has 28 acres occupied with fruit trees, of which there are 3000 peach trees, and 2700 dwarf pears. Most of them have been set out about 3 years. They are stated to be exceedingly thrifty and healthy, many of this year's shoots being four to five feet long. The land was subsoiled before planting, and heavily manured with a compost of yard manure and muck. The soil is kept mellow by cultivation, but no annual crop is admitted, except an occasional crop of beans in the peach orchard. No wonder these orchards should be so widely celebrated for their thriftiness, with such treatment as this.

Increase your Manure Heap.

Messrs. Editors—After all that has been written and published in our agricultural papers upon this subject, not half the attention is paid to it that its importance demands. At this time of extreme drouth, I have with pleasure noticed here and there, a farmer entering his swamps and muck beds and taking therefrom material for future use upon the farm. But such incidents are by far too few; every farmer that has upon his land any place of rich mould or vegetable deposite, which in ordinary seasons are too wet to get into without the labor of drainage, should improve the present, and all dry times, to cart to the compost heap, to the hog and barn yards what will help to absorb the liquids, retain the ammonia, swell the amount of manure and greatly enhance the fertility of the soil.

In this way we can, in a limited degree, counteract the deleterious effects of the drouth, for these enriching materials can be taken from their native and useless beds at much less expense than in common seasons. It is an old adage that "there is no loss without some small gain;" and now while we are losing extensively by the severe and protracted drouth, can we not gain a little, and not a *very* little either, by improving our advantages in increasing that which is so essential to keep up the fertility of our lands, and which is the base of all good farming, especially on our old New England farms.

Unfortunately for the writer, there is not a swamp or muck bed upon his premises; he has no such mine of wealth to resort to at this favorable time, or at any time, wherewith to enrich his lands, but he has some scattered materials common to all farms, such as turf upon the sides of the highway, the settlings in the ditches of the road, leaves in the woods which can be gathered in a wet time late in autumn, green weeds, thistles and brakes, the scrapings of the chip yard, and here and there a low place in the rough pasture lands from which a black loam can be taken and removed to the hog yard; and from these sources, with the addition of leached ashes, and corn cobs, into which has been thrown the suds from the wash tub, the wash from the chambers, &c., for a year past, sixty-four loads of first rate manure have recently been taken out of the hog yard and a small compost heap, and put on to two acres of land, which will soon be evenly spread and plowed to the depth of ten inches, designed for a crop of corn next year, and with a favorable season sixty bushels to the acre will be obtained.

Now for the benefit of myself, a brief, and I think nearly accurate computation has been made of the expense of these sixty-four ox cart loads of manure, and its value, connected with the expense of raising and fattening four hogs, with the market value of the pork; and if it is of any benefit to others, they have it for the perusal, but the best way to test their experiment is "to go and do likewise."

	Dr.
4 pigs, five weeks old, at $2 each,	$8 00
Interest 20 months, at 6 per ct.,	80
22 bu. corn each in raising and fattening—88 bu. at $1,	88 00
Feeding, tending, labor of scalding meal, fuel, &c..	10 00
Labor of carting and getting material into hog yard,.	12 00
Skim milk and whey from the dairy of 4 cows,	12 00
Butchering the 4 hogs, 50c. each,	2 00
Interest on cost of hog pen and yard,	4 20
	$137 00
	Cr.
Average weight of hogs at 20 mos. old, 400 lbs—1600 lbs., at 7c.,	$112 00
Lard and other grease from intestines,	6 00
Value of 64 loads of manure in yard, at 1.25 per load,	80 00
Whole avails,	$198 00
" cost,	137 00
Profit, or $15.25 per hog.	$61 00

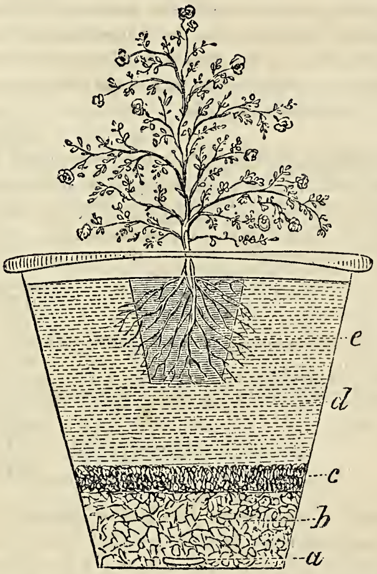
It must be remembered that in this computation perfect accuracy is not pretended, though it cannot be far from the true result. The corn at 1.00 per bushel includes the cost of grinding and transport to mill 3 miles and back; the labor of tending and feeding and keeping the yard supplied is not too high, neither is the interest, nor is the amount of corn consumed, though at first sight it might seem that the cost of the 1600 lbs. of pork is too high, and exceeds the market value by $19.00, not taking into account the manure, and had there been nothing added to the yard so as to get the benefit of the work of the swine it would have come out about even. But a decided advantage and profit is realized by this economical way of making manure, and I have long been of the opinion that pork making in New England above the wants of the farmer's table is not profitable unless connected with an economical method of manure making. The labor of adding material can be done at odd jobs and when other farm work does not drive, and nothing is more deserving the attention of the farmer than this. Every one will agree with me that whatever pursuit or business a man follows for his living, in order to become successful, must be well done; he should be competent, faithful, discreet and energetic, and not get above his business. And of all the occupations of life none require more constant care and unremitted attention than that of the farmer, though he need not make drudges of himself and family. J. W. Colburne.

Springfield, Vt., Aug. 29th, 1854.

The Flower Garden.

SIZE OF POTS FOR HOUSE PLANTS.

We often observe fine specimens of house-plants stunted and kept from a free growth, solely in consequence of being confined in small pots. The roots reach the sides of the pots beyond which they cannot extend, and running round through the soil gradually form a close ball of matted roots very unfavorable to the health and vigor of the plant. The remedy consists in giving them more space; and to render the operation clear and intelligible, we give the above figure representing the appearance of the plant when removed to a larger pot, and the proper manner of filling it, where *a* represents an oyster shell or piece of crockery laid over the hole at the bottom; *b*, the draining materials, which may be broken brick, fragments of crockery, &c.; *c*, a layer of turf and the rougher portions of the soil, to facilitate drainage; and *d* the fresh soil, into which the roots are about to extend.



Some judgment is required in adjusting the size of the pots to the wants of the growing plants. They should not be too large, so as to appear unsightly from the disproportion between them and the plants. They should not be so small as to require too frequent a change, to prevent crowding among the roots.

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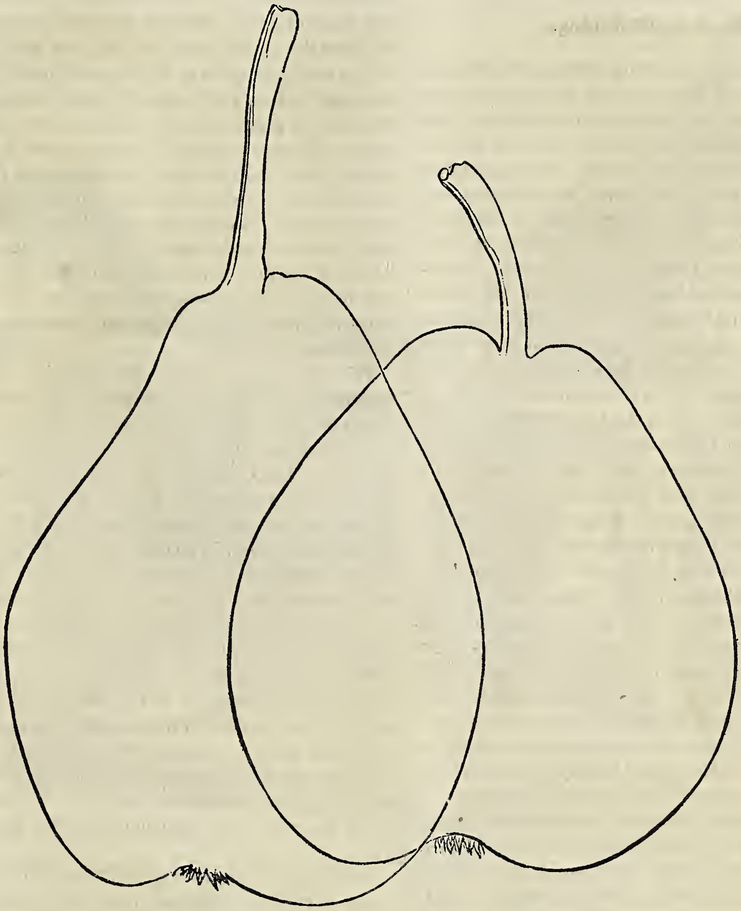
SUMMER FLOWERS—GLADIOLUS.

The genus Gladiolus, or sword lily, sometimes called corn-flag, furnishes some very beautiful ornamental plants. The common purple or Gladiolus communis, is one of our finest hardy plants. Newer, rarer, and still more ornamental and showy, are the two species represented in the accompanying figures,—the *floribundus* and *gandivensis*.

The GLADIOLUS FLORIBUNDUS, or many flowered sword lily, is remarkable for the exceedingly beautiful flesh color of its flowers, marked with a bright red stripe on each petal. The flowers are large and spreading, double the diameter represented in the engraving. The leaves are long, broad and sword-shaped. It is a native of South America, and the bulbs are tender, requiring taking up from the open ground on the approach of winter, as one touch of frost will destroy them. They should be washed clean and kept dry till spring. Two feet of straw, chaff, or leaves, or enough to keep the ground from freezing, will obviate the necessity of taking up the roots.

Gladiolus floribundus.

The GLADIOLUS GANDIVENSIS, or Ghent sword lily, a hybrid, is without the enchanting delicacy of the preceding, but is a very showy flower, of large size having a fine rich orange scarlet color, relieved with yellow. It is three feet high, and blooms through the latter half of summer.



Louise Bonne of Jersey. *Flemish Beauty.*

Notices of Standard Pears.

Louise Bonne of Jersey. This fine old variety has long since taken the head of the list of mid-autumn pears on quince stocks. It seems to be entirely *at home* on this stock, and to succeed even better in most instances, both in the growth of the tree, in its productiveness, and in flavor, than when grown upon the pear. Dwarf trees will live to a great age, and continue to afford abundant yearly crops.

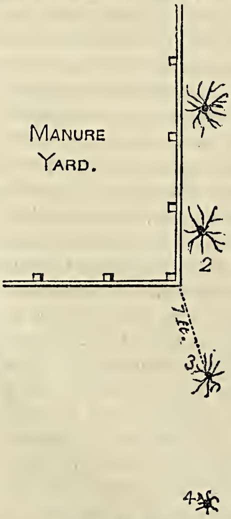
Although this variety is not first-rate in the flavor of the fruit, yet its good size, fair, handsome appearance, and the fine growth and great productiveness of the tree, render it eminently valuable, holding about the same place among autumn pears that the Baldwin does among winter apples, if such a comparison is allowable. A description is scarcely necessary—we may merely state that the fruit is rather large in size, the surface smooth, pale yellowish green, with a brownish, dotted, red cheek; flesh yellowish white, very juicy, melting, somewhat buttery, with a rich, fine, faintly sub-acid flavor. The growth is upright, shoots rather dark, and leaves coarsely serrate.

Flemish Beauty. It is hard to find a fruit that combines so many excellent qualities as the Flemish Beauty. The tree is handsome, productive, and of strong and vigorous growth ; it will flourish on almost any soil, even on a gravel where many other sorts partially fail; the fruit is large, usually very fair, of fine form and appearance, with an agreeable melting texture, and an excellent flavor. The only defect is a liability to drop too soon from the tree, requiring picking in time. To be of the best quality, it needs house-ripening. The figure gives the form, but good specimens are not unfrequently double the size represented. The "Beurré Spence," which Van Mons declared to be the best of all the Flemish pears, and which so long puzzled pomologists to obtain without success, is now believed to be no other than Flemish Beauty. As a proof of the productiveness of this variety, we need only mention the fact stated last autumn at a pomological meeting at Saratoga, by T. C. Maxwell of Geneva, that he had trees seven years planted and two years old when set out, that bore two bushels each, in 1852, and over one bushel in 1853.

Error in Mulching.

We often observe, in riding through the country, that the benefits of mulching are becoming in some degree appreciated, and that many attempts have been made by this means to mitigate the effects of the present season's extraordinary drouth. Yet a great deal of it appears to be applied without any reflection, and is little better than no mulching at all. A small portion of litter is heaped up *close to the foot of the tree*, without one moment's reflection, or without any knowledge whereabouts the roots are that need the benefit. Now, it may be laid down as a rule, which is not far from correctness, that the length of the roots which radiate on all sides from the base of the tree, is about equal to the height of the tree itself—and not as we often hear it stated, only to the length of the branches from the top. If, for example, a young fruit tree is ten feet high, then we may infer that the roots form a circle about twenty feet in diameter, the base of the tree constituting the centre. Over this great surface the finer and more inconspicuous roots form a net-work of fibres; and to derive *full* benefit from manure, cultivation and mulching, a very wide space of ground must be operated upon. This, we are aware, is a larger allowance than is usually made, but our own observations satisfy us that it is more nearly correct than the ordinary estimates. There is one exception, however; and this is furnished by newly transplanted trees, whose roots have been cut very short on all sides in removal from their original locality, and which have not grown and extended so as to fill the usual circle.

It is not necessary, however, in order that manuring and mulching may benefit trees, that the whole territory of their roots should be covered, for a part of them will seize and carry a valuable portion of moisture and nutriment to the tree. We have just observed some striking practical proofs of this truth, which we shall illustrate by the annexed diagram, where 1, 2, 3, and 4, represent the places of a row of peach trees, standing on ground uncultivated the present year, and nearly covered with grass. These trees are about 8 or 9 feet high, and two and a-half inches in diameter; two of them (marked 1 and 2,) grow within two feet of a manure yard, under which their roots extend and receive nourishment, and although immediately surrounded at the foot of the trunk with dense turf, they have thrown out shoots the present dry season from *two* to *two and a half feet* in length. The tree marked 3, stands seven feet from the manure yard, and its roots must therefore go nearly or quite as far for nourishment as the height of the tree, yet the growth on this tree has been two-thirds as great as the two others, or about *eighteen inches*. The tree marked 4, is sixteen feet from the manure yard, and can derive no nourishment from it; its shoots have consequently not grown more than *three* or *four* inches. These trees are all about the same size, the manure yard having been placed there only a year or two since, and the branches from the central dots in the figure are intended merely to show the relative lengths of growth *the present season* on the different trees.



This experiment exhibits in a striking light the amount of benefit which trees derive from the *extremities* of their roots. Another experiment has afforded proof of the little advantage of working close to the foot of the tree. Two peach trees, of the same size as those just named, and in the same orchard growing in grass, had the turf removed and the ground kept clear of weeds, in a circle about four feet in diameter, about the base of each. These made a growth of about *six inches* only, while those wholly surrounded with grass grew about three or four inches. These experiments were all made on peach trees of a single variety—the Tillotson.

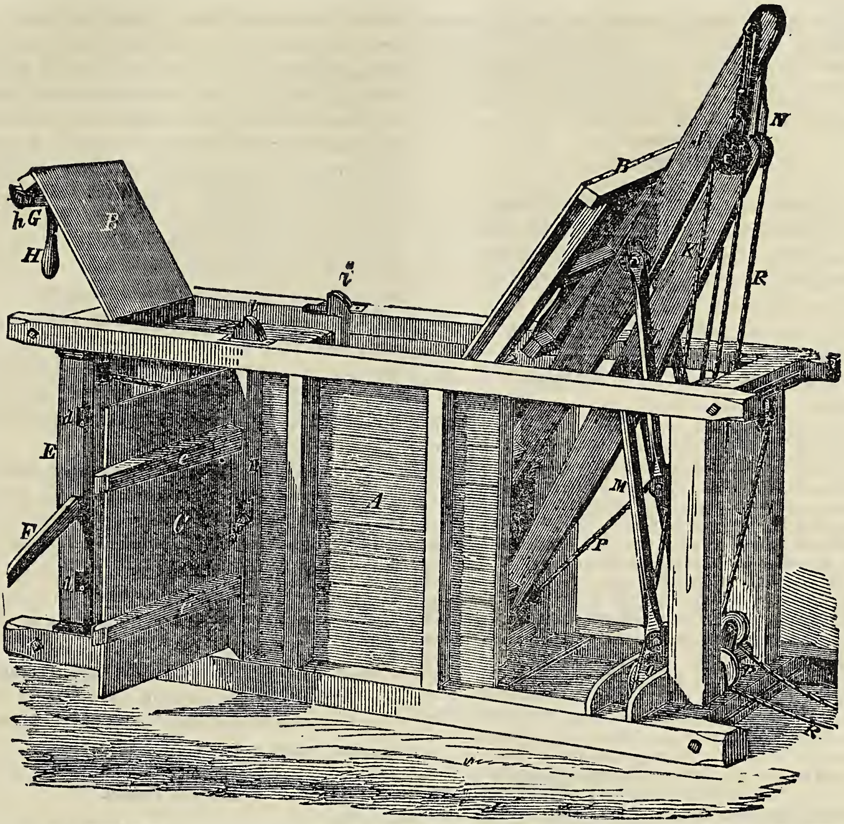
In another instance, a row of peach trees stood in old turf, about seven feet from a strip of manured and cultivated ground. The growth which they made this year was about double the length of the growth on another row of younger trees, wholly surrounded with grass, but which had been cultivated till the present year.

Cultivators, to be successful, will therefore avoid the common practice of heaping little piles of litter in a small circle round the base of the tree—for it is evident from the experiments we have just given, that the nutriment comes chiefly through the small fibres which are most numerous towards the extremities of the roots; and to attempt to feed them by placing the nourishment close to the trunk, is but little better than trying to give a man drink by pouring water into his boots, or than placing the oats for a hungry horse at the wrong end of his stall.

Mulching therefore, (except for young trees newly set out,) should be spread in wide circles, or over the whole surface, leaving the earth bare near the trunk where it is not wanted, and where it might serve to invite the attacks of mice.

NEW PLANT—DICTYANTHUS PAVONII.

This singular plant has produced several of its peculiar shaped flowers, which, in their general appearance when expanded, resemble that singularly offensive flower, *Stapelea pinnata*, except being somewhat lighter in color and without the offensive smell. The plant is a climber, and for its singularity worthy of a place in every hot-house, or perhaps warm green-house. Ours is growing in equal parts turfy loam and peat, in the hot-house. EDGAR SANDERS. *Albany.*



Dederick's Parallel Lever Hay Press.

This engraving is a perspective view of a press, adapted for packing hay, cotton, hops, hemp, &c., for which two patents have been granted to Mr. L Dederick of this city, the one dated 16th May and the other the 6th of June 1854. Mr. D. has furnished us with the following description. Our correspondent in New Brunswick, whose inquiry we published last week, will see that this press can be readily shipped to St. John.

This press differs from others in use, by its being operated lying horizontally, instead of standing upright. This position renders it much more portable, and every way more convenient. Having shoes attached underneath the frame, it can be easily and readily drawn from place to place, without loading on a wagon or being taken apart at all, so that wherever it is drawn it is ready for use. It is also more convenient to fill the box; being low, and the box being opened its entire length, so that one man can easily pitch the hay into it from the floor or ground, and another man can be constantly tramping it down in the box and not interfere with the pitching in.

The binding of the bale is readily done, standing on the ground, and is done with greater ease than will be believed without a trial.

The common method now in use, of locking wood hoops without nailing them, can be done in this press to the best advantage.

The engraving so plainly represents the several parts that particular description of the operation seems unnecessary. Suffice it to say that the frame lies down (as seen in the cut,) and the bale is pressed and formed at one end, standing on its end as shown through the side door which is partly open. The levers are represented as drawn back and the upper doors as opened ready for filling the box again.

The two levers are so arranged and confined together, that they operate parallel; and, producing an equable pressure on either end of the follower, keep it vertical as it traverses through the box.

The levers are drawn back by a small rope, and drawn downward by a larger rope by means of shieves suitably arranged. Both ropes pass to the capstan or horse-power, upon the cylinder of which either rope is wound alternately as the operation of the backward or forward movement of the follower is desired. The capstan is so constructed that the change can be made without removing the horse from the sweep or changing his direction. The door fastenings are very novel, and the doors can be easily opened with one hand notwithstanding the heavy pressure within.

This press is manufactured in this city at the Premium Ag. Works, by Messrs. Deering & Dickson. It is substantially built; all the parts liable to friction are of iron, and the whole is constructed with a strict reference to durability. In a machine exerting so great an amount of power the question of durability cannot enter too largely into the account, when a comparative calculation is made as to the price of such machines. This press has been in practical use for two years, and judging from the certificates and letters shown to us, received from parties using these presses, as well as the increasing demand for them, there is every reason to believe they give good satisfaction, and must come into general use.

For transportation, these presses are taken apart, and with the accompanying directions, they can be put together again all ready for operation, in a few hours. Thus they can be sent to any part of the country.

Price of presses from $130 to $165, including capstan. Weight of presses from 1600 to 2000 lbs. Weight of bales from 250 to 400 lbs.

Ice House.

A correspondent of the New England Farmer, gives a description of a very cheap mode of erecting an ice house, which he has found to keep ice the year round without any difficulty. The whole cost was three thousand feet of lumber, 25 lbs. of nails, and four or five days work, not exceeding in all about twenty-five dollars. It is built within another house, which he finds to be of great advantage. The following is the description of his mode of building:

In the first place, dig out the dirt where you wish your house to stand, to the depth of two feet, or more, if exposed to frost greatly, and fill up with stone, then put your sills on level with the ground, put in strong sleepers, and cover this over with three inch plank. Commence upon these plank with scantling, sawed one and a half, by four inches for your wall, laying one upon the other and nailing them one to the other; inside of this lay up another tier, leaving a space of about four inches to be filled up with sawdust, or tanbark; so continue till you have it as high as you wish for ice; then take plank and cover over, having them come to the outer edge of your inside wall; continue on as before with your walls, until as high as you like, and cover all over with plank two inches double; if under cover no roof will be necessary more than this. Have two doors, one where the ice is, and one above where you can put in butter, milk or anything you like to have kept cool. Bore these upper plank full of two inch holes, the ones above the ice; and the ones at the bottom of the house bore half inch holes through them once in about a foot all over the bottom, and spread two inches, or more of sawdust or tan-bark over the bottom before putting your ice in. Pack the ice as closely as possible, not having it come quite up to the top and edge of your house, and when full throw sawdust, or whatever you may use, over the top, and also fill up between the ice and sides of the house and I will venture to say you will not be out of ice by reason of melting by July 20th. Joseph Blake. *Ashfield, August* 17.

Sowing Grass Seed in Autumn.

We have never succeeded so well in seeding land speedily and heavily with timothy, as by sowing about or before mid-autumn, or as soon as the moderately damp weather has fairly set in, and harrowing it lightly, without connexion with any other crop. It has always afforded a good product the following season, but not equal to that of the second summer. Several interesting experiments, corroborating the advantages of this practice, are reported by S. O. Knapp of Jackson, Michigan, in the Michigan Farmer. The land, which was new, had been in consequence of stone and brush, but very imperfectly plowed late in the autumn of 1851; and without further plowing the next spring, a heavy seeding of oats was applied, and thoroughly harrowed. The crop was good, and as soon as it was harvested, the ground was plowed and near the end of September, 8 quarts of timothy seed were sown per acre. A month and a half later, two acres more were seeded in the same manner. An equally heavy crop of grass was cut the following summer ('53,) from both portions, estimated at two tons per acre of dried hay. Another portion of land was sown with grass in spring, on ground in better order than the other; but although this formed a good turf, it gave no crop of hay. In one instance, late sowing during a drouth did not succeed so well;—the growth being small, about one half of the grass was winter killed; but the vacancies were well supplied by early spring seeding. A single experiment was made with fall sowing of clover, with the timothy. The time is not mentioned, but it is stated that although the young plants formed only the third leaf, they escaped the winter without injury. Our own opinion is that autumn-sowing of clover, to be at all relied on, should be performed early in autumn, and if a wet period follows, it would doubtless succeed well.

The results of the preceding experiments have strongly shown the advantages of sowing grass seed *alone*—mixed with other crops, they operate precisely as weeds, and choke it out of several months growth. It is very important, indeed, that it be sown at the *right season*; but with this precaution, we are satisfied it is much more certain of success when sown alone.

We observe in a late number of Moore's New-Yorker, a statement of the eminent success which resulted from early fall sowing, after several failures in seeding with spring crops.

Dwarf Pears.

We never saw finer bearing dwarf pears than the present season on the grounds of Bissell & Hooker and of Ellwanger & Barry, of Rochester, N. Y. The former showed us several *Bartletts* in a row, six or seven feet in height, bearing a good crop, and appearing in every respect as healthy and thrifty as trees of the same variety standing near them, on pear roots. Two trees of the *Louise Bonne Jersey* presented a beautiful appearance, both from their thrifty appearance and dense crops of handsome fruit. We never saw fruit trees of any kind more heavily laden—an acre of such would certainly afford a large pecuniary profit. Ellwanger & Barry have large numbers of fine specimen trees; and although the season has been unfavorable to some, others were handsomely loaded. A small tree of the *Tyson*, about four feet high, was profusely filled with pears, and we never saw a more beautiful picture than this graceful little tree with its trusses of ruddy cheeked specimens presented. It is to be daguerreotyped. The *Beurré Giffard*, on the same grounds, afforded specimens, notwithstanding the unusual season, having all the freshness, juiciness, and high flavor which in former years it has been found to possess. It ripens before the Tyson and Rostiezer, or about the time of Osband's Summer, and although much inferior in the vigor and beauty of the tree, is certainly decidedly ahead of the latter in the quality of the fruit. This and the Summer Doyennè are the two greatest acquisitions of late years among summer varieties.

Mountain Ash, &c. from Seed.

Messrs. Editors—Will you please inform me through the "Cultivator," when Mountain Ash berries should be gathered, and how treated to raise trees—the same of Balsam Fir cones. Also where in New-York City, "Downing's Fruit and Fruit Trees of America" can be procured. J. L.

Mountain ash berries should be gathered late in autumn when fully ripe—the seed separated by mashing and washing—and then immediately mixed with fine clean sand. They should be kept moist, subjected to the freezing and thawing of winter, and planted in a bed of fine mould, not more than half an inch deep. Shading from the hot sun may be necessary for the young plants.

Fir cones are gathered late in autumn, or just before opening to drop the seeds, and placed in a dry warm room till the seeds become capable of easy separation. They are to be planted in spring, in a bed like that for mountain-ash, and the young plants shaded from the sun as an indispensible requisite. It is much better and cheaper to procure the young trees from the forests or from nurserymen, than by the nice, troublesome, and slow operation of raising from seed under our hot suns.

Downing's work on Fruits, we believe is out of print. If to be had in New-York, C. M. Saxton, 152 Fulton Street, will furnish it.

Inverted Scions—Planting Chestnuts.

Messrs. Eds.—Can scions be made to live, set wrong end up? I have tried some, and never had one live.

I wish to find the best plan for sowing chestnuts for timber—the quantity per acre, and the time. Levi D. Markham.

It is not probable that inverted scions could be easily made to live, neither do we see any object for so strange a conceit. In former times, the lovers of oddities amused themselves by inverting growing trees, first bending down and burying the top, and afterwards loosening and elevating the roots, thus presenting a tree growing, roots upwards!

Chestnuts are so hard to transplant that it is better to plant at once the seed where the trees are to remain. The seed should be secured while perfectly fresh from the tree, and if not immediately planted, they should be packed in moist sand or leaf mould till wanted. If even the outside shall become dried, they will not grow. They may be planted in hills like corn, but rather more remote, and after a year or two all the plants thinned out but one in each hill. This will give an even uniform plantation, which will present a most beautiful appearance when the trees begin to assume the character of a forest. Cultivation should be given for a few of the first years.

Disease in the Bark of Fruit Trees.

Messrs. Editors—Can any of your correspondents give any information as to the cause of young fruit trees, in apparent thrifty condition, having dead spots appear near the ground, of various sizes, some reaching nearly half way around the trunk? The bark soon becomes dry and hard, and then comes off and leaves the wood dry and hard. Some of my trees have been set 4 or 5 years in grass lands, and manured by digging away the top of the ground, then putting a bushel basket of good manure, and then replacing the earth again. This is done in the spring. Any information in regard to the cause or remedy will oblige me and perhaps others. T. S. Hoyt. *Walton, Del. Co.*

Our correspondent does not mention what *kind* of fruit trees are thus affected. This disease is not new, but cultivators differ as to its cause. A bushel of *unmixed* manure applied to a tree, would be hurtful in most instances and cause a succulent unhealthy growth, which would be liable to injury from changes of the weather—and this may be the cause in the present case. Manure should be applied *in autumn*, and in spring be well mixed with the soil by spading. Compost is best.

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Market Pears.—If you wished to plant a pear orchard of standard trees in rich sandy soil, with a gravelly subsoil, on an elevated site in this country, exclusively for marketing purposes, and had daily railroad access to the Pittsburgh market, and was restricted to three varieties, one of which should be an early, one a fall, and one a winter Pear, what kinds would you select? L. *Allegheny Co., Pa.*

The *Bartlett*, *Virgalieu*, (or Doyenne) and *Easter Beurre*, the latter on quince. Some would perhaps prefer the *Louise Bonne Jersey* on quince, or the *Flemish Beauty* on pear stock, for autumn varieties, or the *Winkfield* on either pear or quince, for a late sort. The latter would perhaps prove more profitable than any other, from its great productiveness.

To Destroy Tanzy and Live-forever.

Answer to H. Stone's Inquiries.—Spade the turf about six or eight inches deep, and throw the whole mass, tops, roots and all, into the hog-pen. Should any more appear the next year, or any time after, let the same process be continued; and two or three trials, if not the first, will annihilate the whole or any other foul stuff.

The raising of tanzy can be made profitable. I once had a neighbor that made himself independent by raising tanzy and mint for the distillery. But somehow, I never liked the idea of raising tanzy and mint, or even hops for a living; for while it might bring wealth to the grower, it would add nothing to the permanent, productive wealth of the nation. There are men whose minds never reach beyond a bed of mint, and whose aspirations never ascend higher than a hop-pole. Let such men devote their minds and their lands to such purposes. But let men of broader minds consecrate their lands to better purposes, and devote their lives to such labors as will not only enrich themselves but add to the permanent wealth of the nation.

There is another consideration. There is no vegetable, more wasting to the fertility of the soil, than tanzy, while it adds the least of any to its fertility by being turned to manure after having been used. J. L. Edgerton. *Georgia, Vt., Aug.* 26, 1854.

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☞ The telegraph informs us that the Ohio State Fair has been postponed to the 17th—20th of October.

Imperial Establishment at Rambouillet for the Breeding of Merino Sheep.

Probably some of our readers may derive a few useful hints from the following items of information in regard to the above very celebrated establishment in France, which are derived from an account of a visit paid to it in the month of July last, given in the North British Agriculturist of Aug. 6.

The above-named national establishment for the breeding of the pure Merino sheep has been in existence for nearly seventy years, during which time the greatest possible attention has been generally bestowed to maintain the Merino in the highest state of cultivation. In the year 1786 the King of Spain made a present to the King of France of a small flock of Merinos. These upon their arrival in France were sent to the farm connected with the domains of the Royal Castle of Rambouillet where the stock has since received every care in order to keep it up to its original perfection, or improve it if possible. The establishment at R. is about 30 miles from Paris.

In judging of the excellence of particular animals, the following points seem to be most particularly attended to. The horn is much looked to in determining value, and open horns, not too closely placed together in the head, are especially esteemed. The expression of the eye should be placid and mild; the upper lip thin and flexible and the lower lip thick and firm. The skin should be loose on the face and neck. At the top of the head, and where the head and neck join, there is a pad of gristle. This is hard and slightly movable in its place. This development increases with the age of the buck, and is another element in judging of value, being an indication of energy of constitution.

The form of the body of the Merino in most esteem may be best understood from the following measurements which are those of two of the best specimens of bucks.

	Buck 32 mos. old	Buck 20 mos. old
Height at shoulder,..........	31 inches	30½ inches.
Length of body from top of tail to the horns...........	32 “ (?)	39 “
Breadth of horns............	20 “	22 “
Length of head, ...	13 “	11 “
Girth of body,...............	43 “	40½ “
Breadth of hooks,...........		8½ “
Length of quarters,.........		9 “
Girth of foreleg above knee,.		9 “
Girth below the knee,.......	3¾ “	3⅝ “

The average weights of the four quarters after being slaughtered were, of males 56 lbs., of ewes 52 lbs. But it must be taken into consideration that sheep in France are not fattened to the same state as with us. Consequently additional weight per quarter may be safely allowed.

The number of sheep at Rambouillet on the 31st of July last was 620, of which 118 were males and the remainder females. Previous to the last sale there were upwards of 700 sheep. Of those sold, 30 bucks were for Austria and 40 were taken off by breeders in different departments of France. The average price of the bucks was a little above $100 (£20) each. The highest price was $400. There were purchased by private sale for America 16 ewes and 1 buck. The price of the ewes was $20 (£4) each.

As wool, not flesh, constitutes the value of the Merino, they must be judged of mainly by the value of the fleece. Lambs are usually dropped in November and December, and the shearing commences in June. The first clip is therefore from sheep about eight months old. The average weight of the fleece of males at this age is 3½ lbs., and that of females at the same age of 8 months, 3 lbs. A deduction must be made from the above as the sheep are never washed. The deduction on this account may however be counterbalanced by the fact that the wool on the head, neck and legs of the young sheep is not clipped. This covering of wool is found to be essential for the health of the young sheep, to protect the head from the heat of summer, and from the cold of winter. The average weight of fleece in males 20 months old is usually 14 lbs. The average weight of fleece in females from 20 months to six years old from 8 to nine lbs., or 8½ lbs. After six years the weight of the ewe fleece falls off. The ewe produces the finest quality of wool.

The following is an outline of the method of breeding and keeping the sheep at Rambouillet. The best bucks are selected for service, but are not retained for more than two, or at most, three seasons. The ewes are generally set aside after having three crops of lambs; but those ewes which produce superior fleeces are kept one or two seasons additional. The inferior males are not used at all.

The flock at R. is kept housed from November to April; and during the rest of the year the ewes are turned out to pasture in the morning and again in the afternoon after rest and shelter at noon; while the bucks are turned out only in the afternoon. During rains all are kept to the house. Every care is taken to prevent the sheep getting wet—wetness and dampness being found to act prejudicially against the fineness of the fleece. "As the same care is taken with the Merino in Saxony, it may be held as established by experience that extreme fineness of fleece is only attainable by studying to protect the sheep from wet and damp." If this is as important as the above-quoted opinion would represent, then it is essential that those who are desirous of improving the fleece of any breed, should not only drain their lands to protect them from any under-dampness, but should provide less or more shelter for the sheep, according to the character of the breed.

The houses for the sheep are large buildings with granaries above. The ceilings of the house for the sheep are lofty, and ventilation is secured by windows placed high in the walls. These windows are protected with iron grating, and with wooden shutters for closing when necessary. The floors are bedded with straw frequently renewed.

During winter the sheep are fed three times in the day. Twice a day they are allowed a mixture of oats and barley,—two-thirds oats and one-third barley. The quantity allowed daily is one litre, or about two pints of our measure. Bran is also allowed. The allowance of hay is about 2 lbs. daily, and of mangold wurzels double that quantity.

Every buck is numbered on his horns, and the numbers are all registered. As care is taken to prevent all intermixing at the time the bucks are following the ewes, the pedigree can at once be traced.

The lambs all drop in the months of November and December. They are allowed to follow their dams for about four months, and then fed as the older sheep. Twin lambs are not desired. When twins occur, one of the lambs is slaughtered when it is three days old. As the intention is to produce sheep of strong, vigorous constitutions, this destroying of the extra lambs is deemed advisable. The number of ewes allowed to one buck is forty to fifty.

The Merino breed is rapidly extending in France, particularly for the purpose of crossing the native breeds. When the thermometer is about 90° Fahr. the sheep at Rambouillet have usually refused to feed. The profits of the establishment at R. have been large. The average sale of bucks during a year is seventy or eighty. This number taken at an average of $100 a piece gives a large sum.

Hemlock Hedges.

Eds. Country Gentleman—Can you give directions through your paper, for the cultivation of Hemlock Hedges?

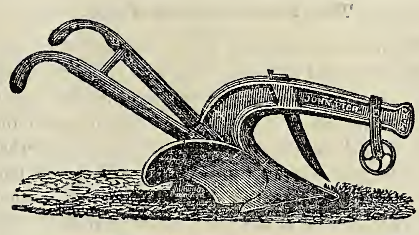
A paragraph giving particulars will greatly oblige A Would-be Farmer. *New-York, Sept.* 4, 1854.

The first thing is to procure the plants. If our correspondent can find a locality in the woods where young hemlock trees are abundant, he will have no difficulty in forming a hedge. The great requisite for success in transplanting is to remove a considerable portion of earth on the roots of every tree. If this cannot be done, they should *instantly*, on being withdrawn from the ground, and before the outside of the roots have dried in the least, be buried in wet moss,—or still better, if practicable, dipped first into a bed of thin mud, and then protected with moss. Another mudding, and puddling on setting out, will be of additional service.

If the young plants can be had from a nursery, where they have become hardened to open ground, they will be still better. We know of no nursery in the vicinity of our correspondent's residence, more likely to supply good plants than that of Dell & Collins of Waterloo, N. Y.

The mode of planting must depend on the objects of the hedge. If for a simple *screen* from the wind, and if the plants are scarce or costly, a distance of three or four feet apart will be near enough, to form in a few years, a continuous line. But if a *hedge proper* is wanted, the trees should be within about a foot of each other.

The hemlock will make the handsomest screen or hedge of any evergreen known; it will bear almost any amount of shearing, and the hedge may be formed into a smooth wall of verdure, or be left for a tall natural growth. Either way, it is of surpassing beauty. If cattle or other animals cannot *see* through, they scarcely ever attempt passing, even a weak hedge.



Rich's Cast Iron-beam Plow.

The following testimonial in favor of this plow, which is manufactured by Brown, Rich & Co., at Troy, and which is becoming very popular wherever it has been introduced, is from an extensive planter of Virginia.

Bonnie Doon, Culpepper Co., Va., Sept. 1, 1854.

Messrs. Editors—We of the Old Dominion are making strenuous efforts to renovate our lands which have been exhausted years ago, first by the continued cultivation of tobacco, and secondly by the alternation of wheat and corn without any intermediate crop to arrest the constant draught upon the soil, or meliorate its condition—third and last, though not least, by shallow plowing—the consequence of which is that no new soil is added to the few inches turned up by the plow, the rains cannot penetrate beyond the loose earth, and the greater portion of them runs off as soon as it falls, and not unfrequently carries off with it what loose earth there is. The crops are drowned out or washed away in wet weather, and burnt up in dry. We are greatly indebted to your state for agricultural implements of various kinds, but the implement of incalculable value as we conceive, is a plow lately introduced into this state and now in great demand in many portions of it. It was patented by John Rich of Troy in 1849. It is an iron-beam plow, short and curved; the shortness of the beam brings the power near the draught, enables the plowman to turn shorter and quicker around rocks and stumps and at the end of the rows,—the curve prevents choking in stubble, clover, &c. The chief advantage, however, this plow has over all others I have tried is, that with it I can plow from one-third to one-half deeper with the same force than with any other I have ever tried. The plow is the most valuable of all the agricultural implements, and your fellow-citizen John Rich, in my opinion has contributed, by this invention, more to the improvement and consequent wealth of the country than any man of any profession in it. He has received repeated honors and medals from agricultural societies and fairs, but the country should honor him in a more substantial form. W. B. Slaughter.

The Cheapest Cistern.

Messrs. Editors—I saw in one of your numbers, "the cheapest and the best cistern," which the correspondent says is, to dig a hole in the earth—then brick up, and plaster with cement. I am not mistaken in saying that I have built hundreds of cisterns which are as durable and much cheaper. My plan is to dig a hole in the earth—put on four preparations of cement, and then let the water in. The whole expense of a cistern of this kind, that will hold thirty barrels, will not exceed twelve dollars. A. Butterfield. *Colosse, Oswego Co., N. Y.*

The Vermont State Fair.

The fourth annual fair of the Vermont State Ag. Society was held at Brattleboro', Sept. 12th, 13th, and 14th. It seemed not inprobable that the dry season and general cry of "hard times," might lessen the show of stock and the attendance of visitors somewhat below the expectations a good season and easier money market would excite. We were on this account the better pleased to find the Vermont Exhibition the exact reverse of all our fears,—to learn as we did, that the receipts this year were nearly *double* those of last, (say $5,600,) and that the indefatigable labors of its officers had received a happy and well merited reward. The weather was, until noon the third day, all the most sanguine friends of the society could have wished,—an air, clear and bracing, a bright sun, and roads, neither uncomfortable from mud or dust.

The Grounds were about a mile to the south of the village, and contained nearly forty acres. The surface was generally level, excepting where it declined on the southern extremity to a little stream, and the hill-side thus afforded, shaded by a fine grove, was put to the best purpose, (of which hereafter,) by the Society, as indeed was every other natural facility offered them. For instance,—the water of the stream was pumped to the top of the hill by a simple hydraulic contrivance, and thus afforded in abundance to supply the wants of the stock,—being carried in pipes to different parts of the field. On the farther side was the track for horses, entirely distinct from the remainder of the grounds,—thus obviating the continual crossing and re-crossing necessitated where a track winds among, or circles about, the other buildings. Its length was a half-mile, and it was broad enough and graded with sufficient accuracy to render it one of the very best for its length we have ever seen.

The Structures.—There were buildings to the south of the track, denominated as usual, "Mechanics" and the "Floral" Halls. The stock pens were stretched along two sides of the field, and near the halls were in several rows for the accommodation of sheep. They were all *roofed* to a greater or less extent, affording shelter, as well for the dumb animals who cannot complain of driving rains or beating sun, as for the owners of them, who have sometimes at exhibitions found ample tongues to hint the want of these necessary appendages. At the foot of the hill-side mentioned above, was placed a platform, shaded and roofed, where the address was to have been delivered, and along in rows above this, seats for the audience, after the manner of an amphitheater,—these last also in some measure shaded and roofed by the trees that here and there dotted the declivity. But the rain that came on the last day was too much for their light protection, and the address had to be delivered in Mechanic's Hall. There was also a notable structure to overlook the trotting course, upwards of 200 feet in length, and containing some 15 or 20 tiers of seats. This was securely built, and if any declined to take its fine birds-eye view of the whole grounds as well as of the course, it was because there was a small charge made to pay the expenses of its erection, and not that the firm timbers that could be seen upholding and bracing it, left room for the slightest fears as to its security. There was little want however, of the absentees. During Wednesday the staging was estimated as containing its full quota, upwards of 2,000; and the next day it also drew a large attendance.

We have spoken thus at length of the excellent arrangements at the fair, not only because they embraced facilities the most superior in almost every particular, and are thus worthy of the attention of all those engaged or connected in the supervision of such exhibitions, but also to unite with others in commending the hearty and well directed exertions of the President of the Society, Hon. Frederick Holbrook, and the executive ability and economic care displayed by the Superintendent, Mr. Lyman P. White. Other officers no doubt there were, worthy of credit for their part, but it would be unjust to omit the names of these two, on whom rested the greatest burden. And we must add that we heard not a dissenting voice from the general satisfaction. The quiet demeanor and well-bred appearance of the great body of the visitors was also noticed,—and the entire absence of intemperance and disturbances of any kind added no little to the universal enjoyment.

We must be brief in noticing the several objects exhibited. The greatest show was of course made in Sheep and Horses, although that of Working Oxen was also fine.

Horses.—The exhibition of Horses was not quite as large as that of last year, though we understood that the average excellence was perhaps greater. The *Sherman*, *Bulrush* and *Woodbury Morgans* were pretty well represented, the first by the largest numbers. The show of *Matched Horses* was not large, though including one or two noticeable pairs. There were a considerable number of *Foreign Horses* present.

We understood that a gelding, 6 years old, got by Black Hawk, was sold to leave the State for $1800, the object being of course merely his speed. If we are not mistaken in the animal, he made a mile on the track during the Exhibition between 2.40 and 2.50, and the "Flying Morgan," to whom was awarded a first prize, accomplished the distance in about the last mentioned time. Flying Morgan is said to be entirely *blind*, and is accompanied in his trotting by a boy riding a running horse abreast. He is a remarkable animal. A match between him and the "Merrick Horse," was talked of, though we believe it did not come off.

Cattle.—The Exhibition of cattle was not very large, *Durhams*, *Devons* and *Mixed* Breeds, being the principal varieties shown. The best of these were the Devons, among the exhibitors of which Mr. Sanford of Orwell, had fine animals, imported and from imported stock,—Mr. Walbridge of Bennington and Mr. Stickney of Chester, some very fine pure and mixed. The sole representatives of the *Herefords* were a cow and calf, shown by A. L. Bingham of Cornwall. Among the exhibitors of Durhams were Messrs. Sylvester Smith, Bingham, Hubbell, Carpenter and others.

Mr. Levi A. Dowley of Brattleboro, exhibited, not however for competition, a pure *Hereford* Bull, a splendid short-horned bull of the noted *Bates* stock, and several other animals, which were said to have been very fine, though we did not see them, nor hear of their being present until it was too late to do so.

The exhibition of *Working Oxen* was unusually good. At one time there were upward of 200 yoke upon the field. They were marked by a very general superiority.

Sheep.—The famed Vermont importers of French and Spanish sheep, all exhibited largely. Our friend S. W. Jewett, of Middlebury, to whom we were indebted, as well as to several others, for very polite attentions, and Mr. A. L. Bingham, were among the largest of these. Messrs. Edgar Sanford of Cornwall, Saxton of Vergennes, Sherman, Wright and Dean of Cornwall, all exhibited fine animals. Mr. Geo. Campbell of Westminster West, exhibited a large and fine assortment of his imported Silesian Merinoes.

We understand that very high prices have been lately realized for imported animals of the French and Spanish Merino breeds; and we were told that upwards of

$250,000 worth of sheep had been sold the last year for breeding purposes, out of Addison Co. alone. We gathered some very interesting facts in regard to prices, fleeces lately sheared, and other accessories of sheep raising, for which we have not room here.

The Show of SWINE was very limited, but of very good quality—the animals exhibited being for breeding rather than feeding purposes. Among them were a beautiful pair of imported Essex, from S. W. Jewett of Middlebury.

The POULTRY department included a Grey Eagle,—but not a very great variety of domestic fowls. Vermont does not seem to have been attacked by the mania for chickens as largely as most other states.

There was a good variety of DOMESTIC MANUFACTURES; of IMPLEMENTS for the farm, a very slender assortment; of other mechanical contrivances a tolerable show. We noticed Halliday's Patent Wind-Mill attached to a pump, which seemed to do its duty well.

The PLOWING MATCH was well attended and gave satisfactory evidence that Vermont workmen do some of the best work with some of the best plows.

The ORATION was delivered by Hon. C. T. RUSSELL of Boston. Its subject was the *Enfranchisement of Labor*. It was an able literary effort, though not at all aiming to be practical, and was heard with evident interest. After this, the awards of the Committees on Premiums were read by the Secretary, Dr. Cummings, for which we cannot now make room.

On the whole the Fair was very successful,—which verdict was, what is somewhat unusual, nearly if not quite unanimous. The large crowds of visitors came and saw and went without accident. The officers were happy in distributing the attractions through the different days, and the programme posted every morning was no little convenience. Many older Societies might learn much from the just accomplished Anniversary of Vermont Farmers—and if any suggestions thrown out in the above account, made under some disadvantages, and necessarily brief, shall lead to such a result, the officers of the Vermont Society, and not we are to receive the credit.

Cuttings of Fruit Trees.

(*A Constant Reader*, Cynthiana, Ky.) [We may as well inform our correspondent, and all others, that three weeks are required to arrange, set up, stereotype, print, and mail an edition so large as that of the Cultivator, and that consequently it is impossible to answer an inquiry from a remote State, dated "Aug. 25," in the September number.]

Cuttings should be made in autumn after growth has ceased, or early in winter—they may be preserved by fastening them in a box by slats running across, and then placing the open side of the box downwards with its contents in the bottom of a pit dug for the purpose, on a dry spot of ground, and burying the whole with earth. The slats keep the cuttings from coming in contact with the earth below, and they are preserved in a proper moist condition. Or, they may be packed in slightly damp moss, in a large box, placed in a cellar. Very *early* in spring they should be set out. Every cutting should be cut off just above a bud at the upper end, and just below one at the lower end. Taken off closely to the old wood, with the base attached, they are more sure of growth. They should be set out in a trench, in a rich mellow soil, which is to be packed or trodden closely about them as the trench is filled, and afterwards a mellow surface made by drawing on a little more earth. The length of the cutting should be eight inches to a foot, and two-thirds to nine-tenths buried. Shading the cuttings of any deciduous trees, (including all fruit trees) is of little or no advantage, but it is important to keep the ground uniformly moist; if this is done by watering, the surface should be preserved from crusting or cracking by a mulch. This is the mode of raising quince trees, currant and gooseberry bushes, grapes, &c., but will not answer for the larger fruits generally, in the northern states—it is cheaper to bud or graft, than to procure the few which may be obtained among many failures in this way.

List of State Fairs for 1854.

Ohio,	Newark,	Oct.	17—20
Illinois,	Springfield,	Oct.	3— 6
Indiana,	Madison,	Oct.	4— 6
Iowa,	Fairfield,	Oct,	25
Wisconsin,	Watertown,	Oct.	4— 7
New-York,	New-York City,	Oct.	3— 6
New-Hampshire,	Keene,	Oct.	3— 6
Georgia, So.(Central,)	Augusta,	Oct.	23—28
Connecticut,	New-Haven,	Oct.	10—13
Maryland,	Baltimore,	Oct	3— 6
Missouri,	Boonville,	Oct.	2— 6
North Carolina,	Raleigh,	Oct.	17—20
Tennessee,	Knoxville,	Oct.	18—20
Virginia,	Richmond,	Nov.	1— 3

National Cattle Show,	Springfield, O.,	Oct.	25—27
Southwestern Ag. Society,	Louisville, Ky.,	Oct.	10—13
Pittsburgh Ag. Society,	Pittsburgh Pa.	Oct.	3— 6
Ohio and Penn. Horse Ex.	Salem, Ohio,	Oct.	11—14
Un. Ag. Soc. of Va. and N. Carolina,	Petersburg,	Oct.	24—27
N. England Horse Exhibition,	Brattleboro, Vt.,	Oct.	17—19

Compost for Corn.

MESSRS. EDITORS—The question was asked in the 20th July No. of the Country Gentleman—"What shall we substitute for guano?" The following is submitted for your consideration, without claiming to have made any new discoveries, or intending to bring to public notice a substitute for guano, or any one of the many substances used as fetilizers of the farinaceous vegetables, but to elicit investigation and remark.

I prepared a piece of sward land last April, by turning the turf well under, some six or eight inches deep, and manuring with barn-yard and unfermented stable manure at the rate of twenty half cord loads per acre, spreading evenly as possible the manure over the surface, and harrowing with an iron tooth harrow at the rate of one day, man and team, per acre. The compost used was composed of one part gypsum, and two parts of poultry house manure, well mixed, till the whole mass formed a light greyish and oily feeling compost, comparatively free from scent.

This compost was put into the hill at planting time, about as much as could be taken up easily with the thumb and two fingers; nearly the whole piece was planted, when the quantity of compost was exhausted, and the remainder of the piece was planted without compost or manure, (except such as was spread and harrowed in common with the rest of the piece.) Now for the facts as they have developed themselves during the past dry season. When the corn first made its appearance, the one par twas dark green, while the other was yellowish; the one thick and stalky, the other small and spindling. The one part grew some two feet taller than the other—ears larger and better filled out, and some days earlier, and is estimated to be not less than one-eighth better. CALVIN ALLYN.

Information Wanted.

Corn Husker.—I have somewhere read of Hargrave's or some other corn-husker, but do not know as such an implement, of any practical utility, is to be found. With your permission, I propose to make the inquiry through your valuable papers, if a machine for husking corn, that will do its work well and save labor, can be obtained. I would like you or any of your readers or correspondents, who have tested it, to answer—first, how must the ears be prepared for husking—must they be picked from the stalk, and put in one at a time? How many bushels will a machine husk in a day, and do it well? How many hands are required to tend it, and what power to propel it, and what is the cost of the machine, and where obtained. A. C. J. *Richfield Spa*, *N. Y.*

There was a corn-husker on exhibition at the Crystal Palace in New-York last summer, which it was said would husk, with the aid of a man and boy, 300 bushels per day, and 1200 bushels with horse or steam power. We shall be obliged to any one who will furnish the information desired by our correspondent.

Steeping Posts.—Can you or any of your subscribers, tell whether the idea of steeping stakes or posts in a solution of blue vitriol, is an advertisement for the sale of blue vitriol, or a remedy for their rotting?—how long the remedy has been tried, with what results, and the mode of operating? and oblige. A Reader.

At the time we published the paragraph, relating to the above subject, we wrote to the gentleman who was said to have practiced the method alluded to, for further information, but received no answer, and have heard nothing of it since.

Messrs. Editors—Will you or any of your subscribers give me through the columns of your always welcome journal all the information in your or their power as to the mode of culture of the marrowfat pea as a field crop, generally adopted in your state, where, as I understand, annually many thousand acres are sown with this crop?

Is there any market for them by the quantity? And in what shape are they taken to the eastern markets? Are they put in barrels or sacks or do they go like wheat and by weight?

What particular kind would you recommend for field culture? Can they be threshed with a common machine?

Will you also be so kind as to name the variety of best yellow field corn that ripens *earliest* and where it can be obtained? A. H. Kummel. *Sharon*, *Wis.*

Inquiries.—Can you or any of your numerous readers, tell me how to destroy Tansey, or can it be made profitable to extract the oil. I have a piece that I would like to destroy or turn to some account. Also I will give ten dollars to any man who will send me a receipt to effectually destroy "live forever," or as it is sometimes called, *Ever-Green*. H. Stone. *Warren*,

Inquiry.—Will you, or some of my brother readers, give me a good recipe for making grape wine. H. H. M. *Farmington*, *Ct.*

Fungus on Cabbage Roots.—Will some of your numerous readers, inform me through the Cultivator, what will prevent fungus at the roots of Cabbage? I have raised none for several years past on account of it. A. H. Hackly. *Bridgewater*, *N. Y. Aug.* 16

Fall Plowing.—In the Sept. No. of the Cultivator, there is an article entitled "Fall Plowing," from which I should infer that the author did not re-plow his land in the spring, especially greensward, on which he intended to plant corn. With your permission, will the author please inform not only myself, but your numerous subscribers, as to the real intent, through your columns. J. H. F

Notes for the Month.

Singular Theorising.—The Gardener's Magazine furnishes a new plan for raising carrots, written by a certain self-styled "professor" not unknown to our readers. The plan is simply to mix radish seed with the seed of the carrot in sowing; the radishes will come up first and will break the crust; the leaves of the radishes will shade the carrots, and their long tap roots will bring up the moisture." The radishes will also "mark the rows, and prevent, very much, the growth of weeds."

Now is not this shrewd! "*The leaves of the radishes will shade the carrots*"—will not the leaves of pig weeds do this quite as well, and save the price of the radish seed?—"*Their long tap-roots will bring up moisture*,"—but will they let the carrots have any when it is brought up? What smart farmer's-boy does not know that the leaves of the radishes would throw off the moisture drawn up through the roots, faster than the sun could evaporate it from a bare surface? "*The radishes will prevent the growth of weeds*,"—by performing towards the carrots all that weeds themselves would do, namely, choking them down by their broad leaves, and exhausting the soil of its moisture and fertility. Would it not be cheaper to "prevent the growth of weeds" by sowing pigweed and fox-tail in the rows? No wonder that some readers acquire a dislike to "science" and book-farming, when such stuff as this is promulgated by pretenders.

"Credit."—We alluded recently to the frequency with which articles were copied from this paper without credit In clearing off the pile of exchange papers which had accumulated on our table during the past week, we had the curiosity to ascertain how many articles they contained which had been copied from this paper. We found the whole number to be 123, of which 77 were properly credited, and 46 without credit, with the exception of a few instances in which "Ex." was attached to them.

More Cattle.—The ship Highflyer from Liverpool, which arrived at New-York last week, "had a large number of valuable cattle for Mr. Thorne, of Dutchess County, and Mr. McHenry, of Baltimore. In the lot there was one prize Devon bull and heifer, and one prize Alderney bull and heifer. The prizes for these cattle were given at the recent meeting of the Royal Agricultural Society of England."

Transplanting Hickories.—The hickory is reputed to be incapable of being removed successfully, and the difficulty appears to be chiefly on account of its deep roots. The Prairie Farmer reports a number of cases where young trees, three to seven feet high have been successfully transplanted from the woods or openings, to the grounds of Augustus Adams, of Elgin, Ill., with the same certainty as any other trees. His mode is to dig down till he gets tired of it, and then cut off the tap root. "He never stops," says the Farmer, "till he gets four feet and from that to six, and yet he states that he never got so low as to find the tap as small as the tree at the surface of the ground."

PITTSBURGH TILE WORKS.—We have received from JAS. WARDROP & Co., the proprietors of the Pittsburgh Tile Works, an interesting pamphlet, setting forth the advantages of thorough drainage, with directions for laying the tile, &c. We always rejoice to see these establishments increase in number, confident as we are that every facility afforded the cultivator to procure tile, is a public benefit. Draining may perhaps be considered one of the modern improvements about the utility of which there is no question. We have never known an instance where money was judiciously expended for this purpose, which did not aford satisfactory returns.

☞ The *Indiana Farmer* claims our neighbor, Mr. D. D. T. MORE of Watervliet, as "the leading editor of the Rural New-Yorker." Beside him of the New-Yorker, and our neighbor, we have another good farmer of the same name in the north part of this state, from which we infer that "the Farmer's Boy," as the late Gov. D. D. Tompkins was called, was a great favorite with the Moore Family.

☞ It is stated that the appropriation bill, passed at the late session of Congress, contains an appropriation of $25.000, for the collection of agricultural Statistics and the procurement and distribution of cuttings and seeds.

ENDOWMENT.—Dr. WM. TERRILL of Hancock county, Ga., has given $20.000 to the University of Georgia, to endow a professorship of Agriculture; and the Trustees, in accordance with the recommendation of the donor, have appointed Dr. D. LEE, editor of the *Genesee Farmer*, Rochester, to fill the "Terrill Professorship of Agriculture."

FINE FRUIT.—We are greatly indebted to Prof. HALL of this city, for a basket of Peaches and Nectarines. The Crawford's Early and George IVth peaches were the handsomest specimens we have seen this season—also to Mr. E. R. BALL of North Nassau, for samples of the Summer Bon Chretien Pear, which exhibited in a marked degree, the effect of cultivation. One of the samples was from a tree near the house, which was well cared for, and which occasionally received a dressing of soap-suds. These were more than twice as heavy as some taken from a tree growing in grass land.

HORT. EXHIBITION.—It was deemed advisable by the board of managers, on account of the effects of the long-continued drouth in this vicinity, to post-pone the annual exhibition of the Albany and Rensselaer Hort. Society, which was to have been held in this city last week. Three of the most extensive exhibitors usually, however, did not get notice of the postponement, and appeared promptly at the rooms with their contributions. Mr. NEWCOMB of Pittstown, had 138 varieties of flowers, (among them several new and very pretty,) several bouquets, 17 varieties of Tomatoes, and half a peck of very handsome seedling Potatoes. Mrs. VAN NAMEE of the same place, had some beautiful bouquets, a very handsome show of flowers, and fine samples of fruit. Among the lot presented by Mr. DINGWALL of this city, 5 large bouquets, 84 varieties of Verbenas, 24 seedling Phloxes, Dahlias, cut flowers, pears, melons, &c., and an egg from Egg plant, weighing 8 lbs. 14 ounces.

☞ We understand that Judge SHELDON of Cayuga Co., has recently sold his Short Horn Bull, Kirkleavington 1st, to Mr. LATHROP of Mass., for $800. It was purchased by Judge S. of GEO. VAIL, Esq. Troy, by whom it was bred from the Duke of Wellington, whose portrait we gave week before last.

COTTAGES FOR FARM-LABORERS.—We have already strongly recommended these for general introduction, for the purpose of relieving farmers' wives from a most laborious, and sometimes almost insupportable burthen, —the boarding of numerous hands. We are glad to perceive by a late number of the *Rural New-Yorker*, that J. P. ROOT, of Sweden, Monroe Co., N. Y., the enterprising president of the agricultural society in that county, who cultivates a farm of 100 acres, has a large number of this character, and keeps only one farm-laborer in his own dwelling. That he has not lost much by this mode of management, is evident from the facts,—that he began farming with $1500 worth of property,—that this is his only business,—that he now has 700 acres of excellent land all paid for,—that his nett profits last year, besides family expenses, were $5.985, or $16.40 per acre on the cleared land,—and that he is not yet forty years old

WEEDS.—If every farmer will look over his grounds he will find that the list of really troublesome weeds is quite small, although there are thousands of species of different plants, which might all become weeds. Why are they not all so? Simply because they have *no seed in the soil*. In some parts of the world, our weeds are entirely unknown. Why? They have not *the seed*. Now if other countries have not our weeds, should *we* have them, if we were only to rid ourselves of the seed? If only a fortieth part of our plants have been suffered to get in and drop their seed, and become troublesome weeds, why should we keep out thirty-nine fortieths, and let the other fraction overrun us? In China and in some parts of Flanders, the fields are entirely free from weeds—the result of long-continued, cleanly cultivation. If the French are not troubled with our red-root, why should not we try for the same exemption? If the English are unacquainted with our chess, why can we not enjoy the same privilege? If a single county in Pennsylvania has never raised a plant of the Canada thistle, why may not all the counties in the Union become equally free? They may—if they will only remember the aphorism, that "the price of this freedom is eternal vigilance."

PRESERVING GRAPES.

The most common way is to pack them in layers with cotton. Sawdust, sand, and even dry maple leaves have been successfully used, and the latter is said to have answered an excellent purpose, being superior to cotton for its superior cleanliness and freedom from the little white fibres which so often adhere to the berries and prove so troublesome when cotton is employed.

We have never found any thing to succeed so well as filling in the interstices with *baked maple sawdust*—using jars which may be covered air-tight.

The last number of the Prairie Farmer furnishes the results of a number of experiments, performed by Jeremiah Price of Chicago, who has tried all the modes he could hear of or invent, including packing in cotton, leaves, sawdust, wet sand, dry sand, and in cans with the air exhausted, and he finds nothing equal to dry oak sawdust or dry sand, the former being best. He has kept them till the following summer. We never succeeded in keeping them so long—solely for the reason, undoubtedly, that they were not under lock and key.

☞ When gentlemen address us on *their own* business, they should not fail to pay the postage—especially if they expect to have their requests attended to.

Asiatic Fowls for Sale.

50 PAIR Brahma Pootra; per pair........$3 to $5
50 do. Buff and Red Shanghai; " ....$2 " $4

All perfectly healthy and warranted pure bred. References—Dr. John H. Cole and S V. C. Van Rensselaer.

E. G. STUDLEY.
Sept. 7—w1tm1t. Claverack, Col. Co., N. Y.

GENEVA NURSERIES.

THESE Nurseries are located on the New-York Central Rail Road, 50 miles from Rochester, and the same distance from Syracuse, having every facility for shipping East, West, North or South. The attention of those that wish to purchase, is invited to the following stock of Fruit and Ornamental Trees:

200,000 Apple, 2 to 4 years—50,000 Cherry, 1 and 2 years—5,000 Standard Pears—20,000 Dwarf do.—5,000 Peach, 1 and 2 years—10,000 Mountain Ash, large size—2,000 Horse Chestnut, 5 to 9 ft.—5,000 Balsam Fir, 3 to 6 ft.—500,000 Apple Seedlings, 2 years—200,000 do 1 year—20,000 European Mountain Ash, 1 year—50,000 Arbor Vitæ—50,000 Basket-Willow Cuttings—50,000 Osage Orange, 1 and 2 years—50,000 Asparagus Roots—together with a general assortment of other stock.

W. T. & E. SMITH.
Sept. 21—w1tm1t* Geneva, N Y.

Fruit and Ornamental Trees,

At the New Canaan Nursery. situated in New Canaan (Ct.) 3 1-2 miles from Norwalk R. R. Depot.

THE subscribers offer for sale, the coming Autumn and Spring, one of the largest stocks of FRUIT TREES in New England, carefully grown and propagated by ourselves.

Our stock consists in part of 40,000 Appple Trees, of suitable age and size for transplanting, of the most popular varieties.

15,000 Peach Trees, one and two years from the bud, of a healthy origin.

Also a stock of Pear, Plum, Cherry, Apricot and Quince Trees.

Red Antwerp, Franconia and Fastolff Raspberries.

ORNAMENTAL TREES, Norway Spruce, Balsam Fir, Arborvitæ. Scotch Pine, Horse Chestnut, Mountain Ash, Larch, and various others.

50,000 Appple Seedlings, 2 years old.

Persons wishing to purchase in large or small quantities, will find it to their interest to communicate with us.

STEPHEN HOYT & Co.
New Canaan, Ct.
Sept. 1, 1854—w1tm2t.

Choice Poultry for Sale

BRAHMA Pootra or Chittagongs—Royal Cochin Chinas—White, Black, Buff and Brown Shanghaes—Black Spanish and Gold and Silver Polands, all warranted pure blood, and of the best importations in the country, or from specimens which took the first and second premiums at many of the recent exhibitions.

Fowls to be sent a distance, will be carefully cooped in good health and good condition. All orders post-paid.

Reference, C. W. Godard, Esq., B. B. Kirtland, Esq., Albany.

GEORGE ANDERSON,
56 Schuyler st. Albany, N. Y.
Sept. 1—w&m3m.

ONE DOLLAR AND TWENTY FIVE CENTS.

ELLIOTT'S FRUIT BOOK,

OR, THE AMERICAN FRUIT GROWER'S GUIDE IN THE ORCHARD AND GARDEN.

SENT FREE OF POSTAGE.

" A large number of Western apples and other fruits are described in this book, which are not found in other works of the kind: and the remarks on the selection of varieties for Western culture, propagation, management, &c., as far as we have had time to examine seem to us judicious and valuable. Every nurseryman and fruit grower, especially in Ohio and the western States should procure a copy."—Ohio Cultivator.

But the chief value of the book lies in its practical details—in its classifications and specifications of the different varieties, with the peculiarities they present, and the different methods of training they require. This branch of the subject, which is very full, is copiously illustrated by drawings."—Phil. North American.

" It is a book that every farmer and fruit grower may profitably read."—Rochester Daily American.

" As Mr. Elliott resides in Cleveland he is much better acquainted with what fruits are adapted to the Central States than horticulturists or pomologists who reside on or near the Atlantic seaboard. This fact gives the work great additional value to those who are engaged in cultivating fruit in the Mississippi valley."—Democratic Press, Chicago.

"Elliot's Fruit Book," is the most direct and practical of any treatise that has fallen under our observation; clear and minute in its directions, both as to modes of culture and qualities of the different kinds and varieties of fruit. We recommend its purchase as an investment that will speedily return many hundred fold."—Binghamton Democrat.

It contains much matter of practical value to fruit growers in the new states.—Rural N. Yorker.

" The great mass of the matter is marked with correctness and with much knowledge of fruits, and the work will of course stand at the head, so far as its descriptions of Western varieties are concerned; and as such we strongly commend it to the fruit raising portion of the community."—Country Gentleman.

" This work, from the examination we have been able to make will probably be found one of the best works on Pomology yet published. The author has had the aid of many of the best fruit growers of this country, and gives drawings of numerous varieties of each class of fruit."—Am. Farmer.

" Mr. Elliott has long been known as a practical horticulturist, and as an able writer on pomology."—Boston Cultivator.

" It embodies all the latest important information pertaining to fruit culture, and we can recommend it as a thorough and reliable work—got up for its intrinsic worth, not for speculation."—Northern Farmer.

" Such a book cannot fail to secure a ready and extensive sale in every part of the country."—Godey's Lady's Book.

" Mr. Elliott is definite in his descriptions, and a man of experience in the culture of fruits in the orchard and garden, and favorably known."—Maine Farmer.

" Mr. Elliott has rendered an acceptable service to the cause of horticulture."—Practical Farmer.

" From what we have seen and read, we cannot hesitate in recommending it as in many respects the most complete and valuable book of the kind in existence. The descriptions of fruit are full, clear, and methodical; and the illustrations of the best order—not mere outlines—but full, or half sectional figures, with cores, seeds, &c., as true to nature as we have ever seen. The book cannot fail of being useful in a high degree."—Prairie Farmer.

" The author of this work now before us has given us a very valuable work on the cultivation of fruits. He was amply qualified to do so, having been for ten years engaged in "the nurturing of trees and noting their products."—Michigan Farmer.

C. M. SAXTON Publisher.
Sept. 27, 1854—w1tm1t. 152 Fulton street, New-York.

THE HORSE, THE HORSE,

Noblest of Domestic Animals,

AND the one most frequently ill-treated, neglected and abused. We have just published a book so valuable to every man who owns a Horse, that no one should willingly be without it. It is entitled,

THE MODERN HORSE DOCTOR,

And is from the pen of a celebrated English Veterinary Surgeon, Dr. GEO. H. DADD, well known for many years in this Country, as one of the most successful, scientific and popular writers and lecturers in this branch of medical and surgical science. The book which he now offers to the public, is the result of many year's study and practiceal experience which few have had.

From the numerous and strong commendations, of distinguished men and the newspaper press, we select the following:

Extracts from a letter from Hon. John H. Clifford, Ex-Governor of Mass.

New Bedeord, May 11, 1854.

Dr Dadd,—Dear Sir:—I hope your new work on the noblest creature that man has ever been permitted to hold in subjection, (the Horse) will meet with that success which all your efforts in this direction so well deserve.

Your obedient servant,
John H. Clifford.

From Hon. Marshall P. Wilder.

Boston, May 13, 1854.

Dr. Dadd,—My Dear Sir:—I am greatly obliged to you for the valuable treatise, the results of your own investigations, which you have recently issued. Hoping that it may meet with the patronage of a discriminating community,

I remain yours with great regard,
Marshall P. Wilder.

The *Modern Horse Doctor*, by Dr. G. H. Dadd, is a manual of genuine science, and ought to be owned and studied on the score of humanity, as well as interest, by every man who owns a horse.—*Boston Congregationalist.*

Dr. Dadd has had great experience in the cure of sick horses, and explains the secret of his success in this vol.—*N. Y. Tribune.*

The author of this work is well known as a most skillful veterinary surgeon. His book is based on the soundest common sense, and as a hand book for practical use, we know of nothing to compare with it.—*Yankee Blade.*

We know Dr. Dadd well, and are satisfied that he possesses most important qualifications for preparing such a book as this.—*New England Farmer.*

Messrs. Jewett & Co. have just published a very valuable work by Dr. Dadd, a well known veterinary surgeon, on the causes, nature and treatment of disease, and lameness in horses.—*Farmer's Cabinet.*

This is one of the most valuable treatises on the subject, ever published; and no owner of that noblest of the animal race, the horse, should be without it. Especiallly should it be in the hands of every hotel and livery-stable keeper. To many a man would it be worth hundreds of dollars every year.—*Ind. Democrat, Concord.*

By far the most learned and copious work on the horse and his diseases we have ever seen.—*N. Y. Evangelist.*

One of the greatest and most commendable qualities of this work, is, it is *practical* and plain to the comprehension of those farmers and others for whom it is mainly designed. The course of treatment favors generally a more sanative and rational system of medication than that recommended in any previously existing works on farriery. No farmer or owner of a horse should be without this book. Stable keepers, stage proprietors and hackmen we believe would derive profit by having at least one copy hung up in their stables for use and reference by their stable men.—*Daily News, Philadelphia.*

There is more common sense in this book than any of the kind we have ever seen, and farmers and owners of horses would find it a matter of economy to possess themselves of it. It will be of more service than the counsel of a score of ordinary doctors.—*Albany Courier.*

We deem this decidedly the best and most reliable work on the "Cause, Nature and Treatment of Disease and Lameness in Horses," ever published.—*Nantucket Inquirer.*

What we have read of this book induces us to regard it as a very sensible and valuable work; and we learn that those much more competent to judge of its value, have given it their unqualified approval.—*Evening Traveler, Boston*

This book supplies a great desideratum which Skinner's admirable treatise on the Horse did not fill. Every man may be his own veterinary surgeon, and with much greater safety to this noble animal, than by trusting him to the treatment of the empirical itinerants who infest the country. It is well illustrated, and should be purchased by every man who owns a horse.—*Ev. Mirror, N. Y.*

This is a book that should be forthwith put into the hands of all who own or drive horses, whether for the dray or gig, for the plow, omnibus or road, for hard service or pleasure. —*McMakin's Courier, Philadelphia.*

A good clearly written book, which should be in the hands of every man who has a horse whose ills his affection or his purse make it worth while to cure.—*Bangor Mercury.*

This is a scientific, thorough and complete treatise upon the diseases to which one of the noblest of animals is subject and the remedies which they severally require.—*Troy Daily Budget.*

It is a valuable book to those who have the care of Horses. —*Hartford Herald.*

He is not worthy to have a horse in his care who will not use such a work to qualify himself for his duties to this animal.—*Commonwealth, Boston.*

PUBLISHED BY
JOHN P. JEWETT & CO.,
BOSTON,
Jewett, Proctor & Worthington,
CLEVELAND, Ohio.
For sale by all Booksellers. Sept. 1—w&m3m.

Every Farmer his own Cattle Doctor.

C. M. SAXTON, No. 152 Fulton-st, New-York, has just published the

SEVENTH THOUSAND OF
DADD'S GREAT WORK ON CATTLE,

THE AMERICAN CATTLE DOCTOR,

Containing the necessary information for
PRESERVING THE HEALTH
AND
CURING THE DISEASES OF OXEN, COWS, SHEEP AND HOGS.
With a great variety of
ORIGINAL RECIPES
And valuable information in reference to the
FARM AND DAIRY MANAGEMENT,
Whereby every man may become his own Cattle Doctor.
By G. H. DADD, M. D., Veterinary Surgeon,
And author of "The Modern Horse Doctor."
Price ONE DOLLAR, and sent free of postage.
C. M. SAXTON, Publisher,
Sept. 21—w1tm1t No. 152 Fulton-st., New-York.

STRAWBERRY CULTURE.

A COMPLETE MANUAL for the Cultivation of the Strawberry; with a description of the best varieties; also, notices of the Raspberry, Blackberry, Currant, Gooseberry, and Grape; with directions for their cultivation, and the selection of the best varieties. "Every process here recommended has been proved, the plans of others tried, and the result is here given." By R. G. PARDEE. With a valuable appendix, containing the observations and experience of some of the most successful cultivators of these fruits in our country.

Price 50 cents, and sent free of postage.

Published by C. M. SAXTON, Agricultural Book Publisher, No. 152 Fulton Street, NewYork. Sep. 14—w1tm1t

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SUFFOLK PIGS

FROM the stock of Prince Albert, which gained the gold medal at Smithfield Club, England, also the first prize at the exhibition of the Norfolk Agricultural Society, Massachusetts, 1853, two to three months old, supplied with food, delivered on board express, cars or vessel on receiving thirty dollars per pair. Or they will be sent to any part of the United States, upon receiving a certificate of deposit for forty dollars, from the Postmaster, that upon their reception, in good order, free of expense, he will pay. Addresss

JAMES MORTON,
West Needham, Mass.
Or GEORGE H. P. FLAGG,
Oct. 1—m1t* Boston, Massachusetts.

FOR SALE,

150 ACRES excellent Farming Land, mostly level, easily tilled, and well improved—pleasantly situated in the Chemung Valley, five miles southeast from Elmira, and two from Wellsburgh Depot, New-York & Erie Railroad. Churches, Schools and Post-office near. For particulats address, postpaid,
S. LEVERICH,
Sept. 21—w2tm1t* Wellsburgh, Chemung Co., N. Y.

Choice Poultry for Sale.

BRAHMA Pootra or Chittagongs—Royal Cochin Chinas —White, Black, Buff and Brown Shanghaes—Black Spanish and Gold and Silver Polands, all warranted pure blood, and of the best importations in the country, or from specimens which took the first and second premiums at many of the recent exhibitions.

Fowls to be sent a distance, will be carefully cooped in good health and good condition. All orders post-paid.

Reference, C. W. Godard, Esq., B. B. Kirtland, Esq., Albany. GEORGE ANDERSON,
56 Schuyler st. Albany, N. Y.
Sept. 1—w&m3m.

Asiatic Fowls for Sale.

50 PAIR Brahma Pootra; per pair........$3 to $5
50 do. Buff and Red Shanghai; " ....$2 " $4
All perfectly healthy and warranted pure bred. References—Dr. John H. Cole and S V. C. Van Rensselaer.
E. G. STUDLEY.
Sept. 7—w1tm1t. Claverack, Col. Co., N. Y.

Fruit and Ornamental Trees.

THE subscribers are prepared for the Fall trade with the largest stock of FRUIT & ORNAMENTAL TREES ever before offered by one establishment in this country. It embraces

Standard and Dwarf Fruit Trees of the best varieties
Strawberries, Gooseberries, Currants, and all the small fruit worthy of cultivation.
Hardy Grapes, for out-door cultivation.
Foreign Grapes, in pots 1 and 2 years from the eye—more than 3000 plants of the best sorts.
Rhubarb, Asparagus, &c. in large quantities.

The Ornamental Department is equally extensive and complete, embracing
Hardy rapid Growing Trees for avenues and public grounds.
Ornamental, Standard and Weeping Trees, for lawns, cemeteries, &c.
Flowering Shrubs for lawns and pleasure grounds in the greatest variety.
Hardy Evergreen Trees in immense quantities, embracing Norway Spruce, Balsam Fir, Austrian, Scotch, and Weymouth, or White Pines of all sizes.
Rare Evergreens, such as Deodars, Cryptomerias, Himalayan Spruce, &c.
Evergreen Hedge Plants, such as Arborvita, Red Cedar, for ornamental enclosures in gardens and cemeteries.
Evergreen Shrubs for lawns, &c. such as Mahonias, Rhododendrons, Tree Box, &c.
Climbing Shrubs for trellises and verandahs, the finest Honeysuckles, Clematis, Trumpet Creeper, Wistaria, &c.
Roses—A large collection of the best varieties in cultivation, besides a complete assortment of the best new
Phloxes, Chrysanthemums, Pæonias, Dahlias, Carnations and Picotees, and other hardy border plants
Bulbous Flower Roots, embracing the finest Hyacinths, Tulips, Crocus, Narcissus, Lilies, &c., imported annually from Holland and forwarded from 1st Sept.
Green-House Plants—all the popular articles, the newest and best Verbenas, Heliotropes, Fuchsias, &c., &c.

Trees are taken up in the most careful manner and packages for distant points, put up in the best style. The following Catalogues will be forwarded *gratis* and prepaid to all who apply post-paid and enclose one stamp for each:

No. 1. A Descriptive Catalogue of Fruits.
No. 2. A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
3. A Descriptive Catalogue of Dahlias, Bedding-out and Green-house Plants.
4. A Wholesale Catalogue for Nurserymen and Dealers.
5. A Supplemental Catalogue of Fruits, containing Prices of Fruit Trees for 1854 and '55, with lists of New Sorts, &c.

All orders will receive prompt and careful attention. The trade supplied as heretofore on liberal terms.

ELLWANGER & BARRY,
Mount Hope Nurseries,
Sept. 1—m2tw90&91. Rochester, N. Y.

Horse Powers and Threshers

OF all the most approved kinds—Wheeler's, Westinghouse's and Emery's Railway Powers and Threshers. Taplin's, Bogardus', Palmer's and Eddy's Sweep Powers and Threshers. For sale by LONGETT & GRIFFING,
Sept. 1—m3t No. 25 Cliff street, New-York.

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb 1—m1y Braintree, Mass.

YALE SCIENTIFIC SCHOOL.

THE FALL TERM in this Institution, will commence on Wednesday, Sept. 13th, and continue fourteen weeks.

FACULTY.
BENJAMIN SILLIMAN, M.D., LL.D.,
Professor of Mineralogy and Geology.
WILLIAM A. NORTON, M. A.,
Professor of Civil Engineering.
JAMES D. DANA, LL.D.,
Silliman Professor of Natural History.
BENJAMIN SILLIMAN, Jr., M D.,
Professor of General and Applied Chemistry.
JOHN A. PORTER, M. A.,
Professor of Analytical and Agricultural Chemistry.

The object of this School is to fit students for the practical application of the branches taught. For particulars, apply to the Professors in the several Departments, or to
JOHN A PORTER, Dean of the Faculty
New-Haven, Ct., Aug. 17, 1854—w4tm3t.

HICKOK PATENT CIDERMILL

As Improved for 1854.

THIS mill has received over Fifty Premiums, Diplomas, &c., during 1853, and is sold by the following Agents, who will distribute circulars, pamphlets, &c.—warranted superior to all others:

Longett & Griffing, 25 Cliff st. sole agents for New-York city.
Geo. W. Emery, Albany.
Dana & Brothers, Utica, N. Y.
Oliver & Helmer, Montpelier, Vt.
William H. Hill & Co., 32 Cornhill, Boston.
Chas. Ashley, Ogdensburg, N. Y.
C. M. Widrig, Elmira, N.Y.
Gregory & Smith, Binghamton, N. Y
Prouty & Chew, Geneva, N. Y.
E. J. Foster, Syracuse, N. Y.
E. D. Hallock, Rochester. N. Y.
H. C. White & Co, Buffalo, N. Y.
Higgins & Calkins, Castile, Wyoming Co., N. Y.
D. Landreth, Philadelphia.
L'Amoreux, Hall & Russel, Towanda, Pa.

Made solely by W. O. HICKOK,
Harrisburgh, Pa.
Aug. 10, 1854—w9tm2t.

Albany Tile Works,

Corner of Patroon and Knox-Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices suitable for land drainage, always on hand in large or small quantities of the first quality, delivered at the docks and railroad depots free of cartage:

Horse-Shoe Tile.		
4½ inch caliber,	$18	per 1000 feet.
3½ do	15	do
2½ do	12	do
Sole Tile or Pipe.		
3 inch caliber,	$18	per 1000 feet
2 do	12	do

Large Tile for drains about dwellings, yards, &c., of various sizes, $4 and $8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains at $4 per 100 feet. Drain your land and save your crops. Orders from a distance will receive prompt attention. A. S. BABCOCK.
Albany, April 20, 1854—w&m6m

Appleton & Alderson's Drain Tile Works,

Corner of Lydius and Snipe streets, Albany, near Mr. Wilson's Nursery.

THE subscribers are prepared to furnish Drain Tile of the various and most approved Patterns, at from $12 to $18 per 1000 pieces. The Tile are more than 14 inches in length and a larger calibre than any of American manufacture for the same prices. We warrant every Tile to be perfectly sound, to fit good at the joints so as to admit water and keep out the dirt, and to drain Land from 12 to 20 feet on each side of the drain, according to the nature of the soil.

Also, large Tile for small brooks and drains about dwellings, &c. at from $4 to $8 per 100 pieces.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at Messrs. L. & W. Merchant's, 71 Quay-st.

Full directions for laying Tile will be sent free to those addressing the subscribers. Orders are respectfully solicited

Address, APPLETON & ALDERSON,
April 13—weow&mtf 195 Washington-st, Albany, N. Y.

A NEW FERTILIZER.

THE LODI MANUFACTURING COMPANY, (who have been manufacturing Poudrette for 14 years,) have, by a recently discovered process, been enabled so completely to disinfect Night Soil, as to present to the Agricultural World that long sought after and greatly to be desired article.

PURE NIGHT SOIL, DISINFECTED AND DRIED.

This article differs from Poudrette, and every other article of manure made from human excrement, from the fact that it contains no mixture of foreign substance whatever, (except 5 per cent. of calcined gypsum, which is used to retain any fugitive ammonia,) the sulphuretted hydrogen which is the offensive gas escaping from Night Soil, is taken from it by a peculiar process. It is, also, entirely separated from rubbish not smaller than a pin's head, and so concentrated, that its bulk is decreased one half by manufacture, yet, at the same time, none of its virtues are allowed to escape. The Lodi Manufacturing Company have selected the Chinese words dessicated night soil, as the name for this article, viz:—

Ta-Feu,

and offer it for sale under the following guarantees;—

1st.—That it is free from unpleasant odor, and contains 95 per cent. of night soil concentrated, and 5 per cent. of calcined gypsum, and nothing else.

2nd.—That it cannot be surpassed by any other manure in the world, either in fertilizing power or in cheapness

3d.—That it is equal to Guano in the proportion of 4 pounds of Ta-feu to 3 pounds of Guano. That it is equal to any superphosphate of lime now in market *pound* for *pound* on any crop, and is one-third cheaper than Guano, and twice as cheap as superphosphate.

4th.—It contains every kind of food necessary to the growth of plants, and is perfectly soluble in water, making, therefore, a splendid *top dresser* on grass and grain.

It is perfectly dry, and can be bagged or barrelled, and sent to any part of the United States. Price $20 per ton, of 2,240 lbs., for any quantity over 10 tons; under that, $25. No charge will be made for cartage or package.

Persons wishing to try it, can send us any amount, from $3 upwards, and the exact number of pounds will be forwarded, with directions for use.

We recommend it strongly on cabbage plants, turnips, wheat, grain and grass, either sowed or harrowed in, or as a top dressing, after the grain is up. On cabbages and turnips it has already been tried with astonishing results, having doubled the size of cabbage plants in a week.

For 300 to 500 lbs. per acre will be a first rate dressing for grass in the fall and for grain followed by grass; a tablespoonful is more than sufficient for a cabbage plant.

All communications must be addressed to the

LODI MANUFACTURING COMPANY,
74 Cortlandt St. New-York.
August, 17—w4tm2t.

GUANO NOTICE.

AS there is a substance now selling by some dealers in this city and Brooklyn, for the No. 1 Peruvian Guano, we caution the agricultural public who may purchase Peruvian Guano this season, to observe that every bag of the genuine article will have the following brand:

NO. 1,
PERUVIAN GUANO,
IMPORTED BY
F. BARREDA BROTHERS.

The price is now established for this season, at $50 per tun of 2,000 lbs. When taken in lots of five tuns and upwards, a discount will be made. LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25, Cliff-Street
Aug. 17—w6tm2t New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application. It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits, and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

---

SPANISH MERINO SHEEP.

THE subscribers offer for sale 12 Bucks, and 15 Spanish Merino Ewes, at very reasonable prices.

A part of the sheep are a cross of the Atwood flock. A rare opportunity is afforded to farmers to improve their flocks at a small expense.

L. S. & L. R. WELLS,
New Britain, Ct. Aug. 17—w1tm3t.

English Cattle.

TO Agricultural Societies and others requiring the best bred Cattle from England, embracing Pure-Blood Horses, Short-Horns, North Devons, Herefords, Ayrshire and Alderney Cows.

Also, Pure-Bred South Down, Cotswold, and Leicester Sheep.

Also, Suffolk, Essex and Berkshire Swine—Imported on commission into any part of the United States and Canada, by *Messrs. THOS. BETTS & BROTHERS, of Herts, Eng.*

Cattle ordered previous to first September, will be insured, if desired.

Every information with regard to terms and shipment of Stock to America, will be strictly attended to by applying to JAMES M. MILLER, 81 Maiden Lane, New-York City, who is fully authorized to act as our Agent.

JAMES M. MILLER, Agent, New-York City. THOS. BETTS & BROS. Herts, England.
July 1—w&m3m

Albany Agricultural Works,

Warehouse and Seed Store, 369 and 371 Broadway, Albany.

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"Emery's Patent Changeable Railroad Horse Powers."
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.
Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.

RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price. GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

Land for Sale.

THE subscriber offers for sale, a portion of his valuable Tract of Land, situated in the county of Fairfax, Virginia, on, and near the Turnpike leading from Georgetown to Leesburgh, 16 miles from the city of Washington, 2 miles from the Potomac river and canal, and within 2 miles of the Loudoun, Alexandria, and Hampshire Rail Road. The tract contains about 2000 acres of Land; of which, from 500 to 600 are in a heavy growth of oak and chestnut, and the remainder of the wood land is in pines of the second growth. It is of a deep red soil, and adapted to Grain, Plaster, Clover, and all kinds of Grass. On the premises are 4 comfortable Dwelling-Houses, and also a Grist-Mill, but not in running order. The land will be sold in lots of 100 or 200 acres, or as the purchaser may desire. For further particulars inquire of the subscriber on the premises.

S. S. MILLER,
July 1, 1854—mtf Spring-Vale, Fairfax Co., Va.

Contents of this Number.

THE FARM.

Shelter for Farms, ... 297
Seasonable Suggestions—Muck and Draining, ... 298
Gypsum on Wheat—Answers to Inquiries, ... 299
Reclaiming Wet Lands—Substitute for Guano, by J. L. Edgerton, ... 300
Experiment Proposed, by K—*—I., ... 390
Weevils in Peas, by H. L. Tiffany, ... 301
Seymour's Seed Drill, by Henry Keeler, ... 301
Improvement of Soils, ... 302
Mediterranean Wheat, by A., ... 303, 307
How to Use Swamp Muck, ... 303
Farmers should Save their own Clover Seed, ... 305
Engine Force Pump, ... 306
The Drouth and its Effects, ... 307
Treatment, Value and Application of Manures, ... 308
Lime for Sorrel Lands, by C. W., ... 308
Increase your Manure Heap, by J. W. Colburne, ... 311
Dederick's Parallel Hay Press, ... 315
Construction of Ice Houses, ... 316
Sowing Grass Seed in Autumn, ... 316
Rich's Cast-Iron-Beam Plow, ... 319
The Cheapest Cisterns, ... 319
Information Wanted, ... 322
Notes for the Month, ... 322
To Destroy Tansy and Liveforever, by J. L. Edgerton, 317
Vermont State Fair, ... 320

THE GRAZIER.

Importation of Cattle—Sale of Ayrshires in N. Brunswick, ... 304
Stoppage of Milk—Cost of Making Pork, by C., ... 304
Cure for Scratches in Horses, ... 304
Heaves in Horses, ... 305
Imperial Establishment at Rambouillet for the Breeding of Merino Sheep, ... 318

THE HORTICULTURIST.

Culture of the Strawberry, by Practical, ... 309
A Fine Orchard, ... 311
Size of Pots for House Plants, ... 312
Summer Flowers—The Gladiolus, ... 312
Notices of Standard Pears, ... 313
Error in Mulching, ... 314
Dwarf Pears, ... 816
Hemlock Hedges, ... 319
Mountain Ash, &c., from Seed, ... 317
Inverted Scions—Planting Chestnuts, ... 317
Disease in the Bark of Fruit Trees, ... 317
Cuttings of Fruit Trees. 330

THE HOUSEWIFE.

Preparing Poultry for Market, ... 306
Elderberry and Ginger Wine, by J. H Rawlins, ... 310
Wheat Flour, Bolted and Unbolted, ... 310
Ready Relief for Bee Stings, by A, ... 310
Green Corn Puddings, ... 320

ILLUSTRATIONS.

Dederick's Hay Press, .. 315
Two Pears, ... 313
Flower Pots, ... 312
Rich's Iron-Beam Pow, 319
Gladioluses, ... 312
Engine Force Pump, ... 306

FRUIT TREES,

ORNAMENTAL TREES, SHRUBS, FLOWERING PLANTS, &C.

AN extensive and select collection of Fruit Trees, propagated from *bearing trees of the finest sorts*, is offered for sale at the nursery of J. J. THOMAS, at the following prices:

Apple trees,		20 cents each	—$16	pr. 100
Peach "		20 "	"	15	"
Cherry "	with fine heads,	37½ "	"	25	"
Pear "	standards,	50 "	"		
" "	dwarfs,	37½ "	"	25	"
Plum "	(large and thrifty,)	50			

Besides the smaller fruits, as Strawberries, Grapes, &c.

☞ Careful selections will be made by the proprietor, when desired, embracing a suitable proportion of the best varieties, so as to afford a regular succession of the finest fruit through summer, autumn, and winter, without additional charge.

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Orders directed "J. J. THOMAS, Macedon, Wayne Co., N. Y.," accompanied with remittances, will be faithfully and promptly attended to, and the trees and plants packed in the best manner for safe conveyance by railway.

9th mo., 1854—w6tm2t

HIGHLAND NURSERIES

NEWBURGH, N. Y.

A. SAUL & CO have the pleasure to announce to their *patrons* and the *public in general*, that their stock of

FRUIT AND ORNAMENTAL TREES, SHRUBS, &c.

Which they offer for sale the coming autumn, is of the *very best* quality, and embraces every thing in their line that can be procured in the trade.

Dealers and Planters of Trees *on a large scale*, will be treated with on as liberal terms as can be done by any establishment of reputation in the country. They flatter themselves, that for correctness of nomenclature of fruits, (which is a serious consideration to Planters that their stock is as nearly perfect as can be; having all been propagated on their own grounds, *from undoubted sources*, under the personal supervision of Mr. SAUL.

They have propagated in large quantities, *all the leading and standard varieties, which are proved* to be best adapted for general cultivation, especially those recommended by the AMERICAN POMOLOGICAL CONGRESS, at its several sessions, as well as all *novelties*, and certain kinds particularly suited to certain sections and localities of the Union, and the Canadas.

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Also, PEARS ON QUINCE, CHERRY ON MAHALEB, and APPLE ON PARADISE STOCKS, for Pyramids and Dwarfs, for garden culture; and of which there is a choice assortment of the kinds that succeed best on those stocks.

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100.000 Deciduous and Evergreen Ornamental Trees, embracing all the well known kinds suitable for street planting, of *extra size;* such as Sugar and Silver Maple, Chinese Ailanthus, Horse Chestnut, Catalpa, European and American Ash, Upright lenticus-leaved Ash, Upright Gold-barked Ash, Flowering Ash, Three Thorned Acacia, Kentucky Coffee, Silver Abele Tree, American and European Basswood or Linden, American and European Elm, in several varieties, &c. Also the more rare and select, as well as well known kinds suitable for Arboretums, Lawn and door-yard planting, &c.; such as Deodar and Lebanon Cedars; Araucaria, or Chilian Pine; Cryptomeria japonica; the different varieties of Pines, Firs, Spruces, Yews, Arborvitaes, &c.

Weeping Trees.—New Weeping Ash, (Fraxinus lentiscifolia pendula,) the Old Weeping Ash, Gold Barked Weeping Ash, Weeping Japanese Sophora, Weeping Elms (of sorts,) Umbrella headed Locust, Weeping Mountain Ash, Weeping Willow, Large Weeping Cherry, Weeping Birch, Weeping Beech, &c., &c.; together with every variety of rare Maple, Native and Foreign; Flowering Peach, Almond and Cherry; Chestnuts, Spanish and American; Purple and Copper Beech; Judas Tree, Larch, Gum Tree, Tulip Tree, Osage Orange, Paulownia, Mountain Ash, (American and European,) Magnolias of sorts, with many other things—including some two hundred varieties of Shrubs, Vines, Climbing and Garden Roses in great variety, such as Hybrid Perpetuals or Remontantes, Hybrid China, Hybrid Bourbon, Hybrid Damask, Hybrid Provence, Bourbon, Tea, China, Noisette and Prairie Roses; also Herbaceous Plants in great variety, &c., &c.; for which see Catalogue, a new edition of which is just issued, and will be forwarded to all post-paid applicants on reception of a post-office stamp to *pre-pay* postage.

A large number of Arborvitæ for Screens, and Buckthorn and Osage for Hedge Plants.

Newburgh, Sept. 7, 1854—w8tmlt.

THE CULTIVATOR:

A MONTHLY JOURNAL OF

Agriculture, Horticulture, and Domestic Economy.

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All subscribers must commence with the January No. and the payments must in all cases accompany the order for the paper.

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THE CULTIVATOR.

THIRD To Improve the Soil and the Mind. SERIES.

Vol. II. ALBANY, NOV., 1854. No. XI.

PUBLISHED BY LUTHER TUCKER,
395 *BROADWAY, ALBANY, N. Y.*

LUTHER TUCKER AND JOHN J. THOMAS, EDITORS.

Terms—Single copy of Cultivator,............ 50 cents.
Twenty copies Cultivator and twenty copies Illustrated Annual Register, } $10.00.

AGENCY IN NEW-YORK.—C. M. SAXTON, *Agricultural Book Publisher,* No. 152 Fulton-street, New-York, is Agent for THE CULTIVATOR and THE COUNTRY GENTLEMAN, and subscribers in that city who apply to him, can have their papers delivered regularly at their houses.

ANNOUNCEMENT FOR 1855.

The question having been frequently asked us of late, whether it was our intention to continue THE CULTIVATOR at its present low price, we take this early occasion to announce to our agents and friends, our arrangements for the next year.

PRICE OF THE CULTIVATOR.

I. Publishing, as we do, THE CULTIVATOR in connection with our weekly journal, the COUNTRY GENTLEMAN, we are enabled to continue the issue of our monthly at the low rate of fifty cents, notwithstanding the increased expense occasioned by the rise in the price of paper and other materials, labor, &c. We shall, however, fix the price at one uniform rate—FIFTY CENTS—whether to individuals or to clubs; but we offer the following

PREMIUMS TO CLUB SUBSCRIBERS.

II. As an inducement to the formation of clubs, we shall send to clubs of twenty or more, a copy of the *Illustrated Annual Register of Rural Affairs* for 1855—(for notice of which see last page of this number)—consisting of 144 duodecimo pages, illustrated by more than ONE HUNDRED ENGRAVINGS, and got up in our usual neat style. Thus in a club of twenty, each subscriber will get a copy of THE CULTIVATOR one year, and a twenty-five cent book, for FIFTY CENTS.

PREMIUMS TO AGENTS.

III. As an inducement to Agents to exert themselves to form clubs, aside from the consciousness of the benefit they will confer upon their neighbors by placing such a work in their hands, we offer the following list of Premiums to those who send us the largest amount of cash subscriptions to our journals for the year 1855, previous to the 10th of April next:

1.	For the largest amount,.	FIFTY DOLLARS.
2.	For the next largest,....	FORTY-FIVE DOLLARS.
3.	For the next largest,....	FORTY DOLLARS.
4.	For the next largest,....	THIRTY-FIVE DOLL'S.
5.	For the next largest,....	THIRTY DOLLARS.
6.	For the next largest,....	TWENTY-FIVE DOLL'S.
7.	For the next largest,....	TWENTY DOLLARS.
8	For the next largest,....	FIFTEEN DOLLARS.
9.	For the next largest,....	TEN DOLLARS.
10.	For the next largest,....	FIVE DOLLARS.

Agents who compete for the above prizes, must, in all cases, remit with their orders, at the rate of Fifty Cents for each copy of THE CULTIVATOR, and one Dollar and Fifty Cents—(the lowest club price, where ten or more copies are taken)—for each subscriber to the COUNTRY GENTLEMAN.

Our weekly journal, the COUNTRY GENTLEMAN, the fourth vol. of which will be completed with the present year, will be continued as usual. Its terms are as follows:

Single copies,..................	$2.00,	in advance.
Three copies,..................	$5.00,	"
Ten copies,..................	$15.00,	"

Fifty Cents a year will in all cases be added where payment is not made in advance.

TO OUR AGENTS AND FRIENDS.

Above you have our terms and arrangements for the next year, to which we solicit your kind attention, as well as your active co-operation in enabling us to carry them into successful effect. We have no new "platform" to offer. Our publications have been too long and too extensively known to require it. For TWENTY FOUR YEARS we have watched the farming population of this country, not with the eye of an uninterested passer-by, but of one mingling in their pursuits, listening to their thoughts, carefully observing their advancement, and laboring both with mind and body to work out mental and "material" profit for them, individually and as a body. When we began our labors in the old Genesee Farmer, our farmers had but little ambition to improve—but little desire, though their lands were deteriorating at a rapid pace, to seek a new and better way; and the years which have since passed, and witnessed so much advancement in other respects, would have seen little progress in the farmer, had he not been induced to *read in and write for his paper*—to emulate his neighbor's successful culture or skillful breeding at town and county and state fairs—to bring the powers of his mind as well as his physical energies to his aid—to look, in fine, beyond the narrow present with its immediate requirements, to the future and permanent "improvement of his mind and his soil." From the sneers, or at least the practical contempt which then met the farmer from the devotees of professional and commercial pursuits, to the general regard now paid by all thinking men to his substantial merits, and by all sagacious statesmen to his interests in the commonwealth—from the suicidal tillage practiced then, to the enlightened culture which prevails to so large an extent at the present day—from the few thousand agricultural books and journals then (1831) circulated, to the hundreds of thousands now scattered abroad, the advance displayed in the intellectual and social condition of the farmer has been great indeed. That there is room for still greater improvement and more rapid progress, and that the same influences which have heretofore proved so beneficial, will now and hereafter avail to effect it, no one can doubt. For their promotion we have labored with untiring zeal for near a quarter of a century; and to the furtherance of the best interests of our rural population, we shall devote whatever of strength and ability may be continued to us.

Keeping the great object of our journals—the promotion of the true principles of agriculture and the elevation of the character and standing of the cultivators of the soil, steadily in view—with no connection with any other concern—with neither prejudice against, nor partiality for one breeder or one seller, one machine or one manure, over others, we hope to maintain the true position that a really independent journal should hold; and we look with confidence to our friends who have so long and so successfully, with each returning year, come up to our help, to renew their efforts to promote the circulation of our journals. If those who have heretofore done so much, will take hold of the work with the determination to increase their lists for next year, and the multitude of others who realize the importance of placing such a journal in the hands of every farmer, will render them their aid, we may safely count upon a largely increased circulation for The Cultivator for 1855.

☞ We send our Prospectuses for next year, to our Agents, with the present No., and should any Agent fail to receive them, he will greatly oblige us by giving immediate notice, that the omission may be supplied.

☞ We shall be glad to send Prospectuses and specimen numbers to any subscriber or postmaster, who may be disposed to act as Agent, on application.

☞ Will our editorial friends increase our obligations, by calling attention to our new volume.

☞ In forming clubs, it is not required that all should be at one post-office. The papers will be sent to as many different post-offices as may be necessary.

Drying Potatoes to Prevent the Rot.

Mr. Tucker—Thinking the following detail of a successful experiment to prevent the rot in the potato, may be useful to your readers, I have translated it from a Dutch journal, for your pages:

"Mr. Bollman, professor at an agricultural institution in Russia, asserts, in a very interesting treatise, that drying the seedling potatoes at a high temperature, is a sure remedy against the rot. He found it out in the following way. He perceived that, putting them in the ground, the eye and the skin were often damaged. He thought that drying them would prevent the damage. In 1850 he put a certain number in a hot room, and after three weeks, he found they were dry enough to be planted. They grew very well, and yielded as much as the surrounding fields, and there was no sickness among them. Professor B. thought it a casualty, nevertheless he dried his seedlings again in 1851, and again the yield was abundant and free from sickness, though on all the surrounding fields the potatoes were attacked by the rot. In 1852 he determined to make a third experiment, and as his own seedlings were not sufficient, he had to buy others, which came evidently from a yield affected by sickness, so that some were quite rotten. After drying them during about a month, he cut them in three or four pieces, according to their size, and dried the pieces again during a week. By chance they were dried so much that he thought they would not grow at all. Contrary to all expectation, they came up so well and grew so fast, that the new potatoes could be gathered three weeks earlier than in other years. Though there was sickness all around, there was none on his field, neither on the leaves or on the bulbs.

"These interesting facts, during three years consecutively, led to an investigation, if more such cases were known, and he found two of them. Mr. Losorskey (government of Witebsk) five years previous, gathering his potatoes, put one in his pocket; coming home he laid it on the stove * where it remained during the winter. In the spring he found the dried potato: he planted it without any idea that it would grow, but unexpectedly he got an abundant yield of healthy bulbs. Since that time he always dried his seedlings with good success.

"Mr. Waisleffsky (government of Mohileff,) keeps his potatoes where he smokes his hams. Once being short of seedlings, he took some of the smoked ones and found that in the yield there was less sickness than in that of his seedlings. Prof. B. is of opinion, that they were not dry enough when planted."

The temperature fit for drying the potatoes is not given. In the first experiment, the hot room was at 72° and upwards. As an essay, Prof. B. put some in the place where the furnace stood, and where the thermometer was at 136°. The vitality was not destroyed even, though the skins were crisped.

The trial is so easy that it is to be hoped it will be done. Kappa. *Newark, N. J.*

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* In Russia the stoves are mostly of earthen or stone ware, with marble top. Trans.

Economy of Manures.

Recent readings and observations have impressed upon us deeply the persuasion that among the bulk of our farming community there is a great want of economy and good management in respect to the manures which the farm itself might be made to yield. We are not prepared to go so far as to say, with Mr. Edgerton in *Country Gentleman* of Aug. 10th, that "no farmer ever need go off from his own farm for means to enrich it;" but we are persuaded that very many allow the fertilizing materials of their vaults, of their sinks, of the droppings of their cattle, and of their swampy lands, to go to waste—giving out their richness, not to the fields and the crops, but to the 'desert air.' We are persuaded that very few farmers are as strenuous about making and saving all the manure possible on the farm, as is the Massachusetts farmer of whom we have recently read, who says, "as to manure, it has been my constant effort to make and use as much as possible from the barn-cellar, yard, hog-pen, vault, sink-drain, &c., always using it the present (current) season. I keep loam constantly in the cellar, which is ready to be put to the droppings." This model farmer commences his winter management of his farm manures, by carrying one hundred loads of mud or black earth, to the cellar, which he uses to throw on to the droppings as often as once a week.

Our persuasion of a general wastefulness and want of economy in the management of the fertilizing materials which the farm itself yields, was considerably deepened by a portion of an extended account of an agricultural school in France, and of the farm attached to it, which we recently met with in an English journal. In this notice of the school and the attached farm at Grignon, it is said that there is little or no outlay for portable or foreign manures on the farm. Guano has been tried but poudrette is preferred, having been proved by experiment to be superior. The English visitor who gives the account to which we refer, attempted to persuade the professors, or those in charge of the farm, that there might be larger crops and more profits secured by the use of guano; but he was met with the assertion that the English farmer did not "conserve," or economize the manure of the farm like the French farmer. In this respect, we fear, the American copies more after the English than after the French pattern.

We feel convinced that much larger crops and larger profits might be secured, if farmers were at a little more pains to prevent the escape and loss of their most valuable fertilizers. For example, much valuable manure might be saved from going to waste, if farmers were at some pains to have all the urine on their premises absorbed and fixed by means of meadow muck and other absorbents or by running it into tanks. Much valuable manure might also be made on every farm, by manufacturing the contents of the vault into poudrette. Domestic poudrette can be made without much difficulty according to directions which may be found in former volumes of this paper.* Much valuable manure might be made, more than usually is, if all that is thrown out of horse and cattle stables, was immediately mixed up, or covered over with earth or muck, after the manner of the model Massachusetts farmer to whom we have already referred. Much, also, might be saved, which is now allowed to go to waste, if manure and compost heaps were more generally put under some kind of cover to protect them from the destructive influences of sun and rain and wind. Much might be done also, to enrich the farms throughout the land, if the rich black muck which the rains of many former years have washed down into our swamps and low lands, were carried back again, either by itself, or still better after having been carried to barn-yard or cellar, and there mixed with the cleanings of the stables and the droppings of the cattle and the poultry in the yards, after the manner of a compost or otherwise.

As long as a farmer suffers all the fertilizing materials above indicated to make their escape, without being made to yield their riches to his fields and crops, he must be suffering leakage and loss. While the fertilizing materials which the farm itself yields are neglected and unused, it seems as if it could be only with an ill grace and a great want of consistency and good policy that any farmer, save in extraordinary circumstances, can lay out money for guano or other marketable manures.

Securing Corn Fodder.

(*In answer to W. J. Pettee, Lakeville, Ct.*)—The only difficulty with corn fodder is in harvesting and securing the crop. The difficulty is greater with the compact stacks of thickly sown crops expressly for fodder, than with the larger and coarser stalks of ordinary corn. The leaves may become perfectly dry after weeks of exposure to fine weather, and the whole appear fit for stacking; when after all, the amount of moisture in the stalks themselves may be enough to cause heating and fermentation, and the loss of the whole stack. The best way is to bind in bundles, and place them at once in good, substantial, large-sized shocks, with a few of the upper and outer bundles reversed, so as to turn off the rain, which otherwise becomes lodged in the fork between the leaf and stalk. In this way, they will become thoroughly dry, and if not drawn till they are wanted in winter, will do well and cannot spoil. Or, after drying in the shock some weeks, they may be placed in small stacks, salted with five or six quarts per ton, with a ventilating hole in the middle, to prevent the accumulating of heat. This hole may be made by building the stack round three upright stakes or rails, set about a foot apart, and touching at the top; or round a bundle of long, coarse brush; or by placing an empty barrel in the middle and building round it, drawing it upwards by a rope fastened across the top, as the stack proceeds. This leaves a hole in the middle for the escape of any generated vapor.

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* See July no., page 176.

Raking into cocks will answer when the stalks are thick, small, and short, but they will become wet through more readily than hay, and it may therefore be best to guard them by a good thick cap of straw on each. A straw covering is a good thing for the stacks. It is best to place the tops of the stalks downwards in finishing off a stack, as in this reversed position, they throw off water much better than in the ordinary way.

The best time to cut is when the leaves *begin* to turn brown and become dry, and after the tassels have fully developed themselves.

We do not think our correspondent will find the summers long and hot enough in the northern states to raise two good crops in a season, with ordinary corn. Further south, and with the earliest ripening nothern varieties, it may perhaps succeed well.

The crop should always be sown in drills and never broadcast. The drills produce better, require less seed, leave the ground cleaner, are more easily harvested, and are equally easy to plant, if done in the right way.

Discordant Views—Subsoil Plowing.

Messrs. Editors—I have taken your paper for a good while and always look for it in hopes of deriving some important information from it, but I will not conceal from you that I think it might be made more valuable. Your own observations seem to me to be shrewd and valuable, but are you not too much in the habit of publishing all sorts of communications or letters, whether they contain any thing useful or interesting or not, and whether they advocate practices in farming which you would approve of or not? You have letters or communications advocating both sides of all the disputed questions in agriculture, and each writer reasoning and theorizing away in favor of his own position.

It is a pity that we could not in some way have a series of careful reliable experiments conducted by some reliable person and the results published. But who is to pay the expenses of such experiments say you.

By the way as to *subsoil plowing*, you know that some *scientific* agriculturists recommend it as really indispensable to thorough first-rate farming, whilst of really practical farmers about here, I know of none who use it. And yet theoretically I have often thought that upon the soil in our neighborhood which is a pretty stiff clay, it might be highly beneficial. I should like to have you inquire through your paper if any person has made thorough and careful *experiments*, comparing the results and expense. I would not give a cent for any theories on the subject unless founded upon well ascertained facts. A Subscriber. *Long Island.*

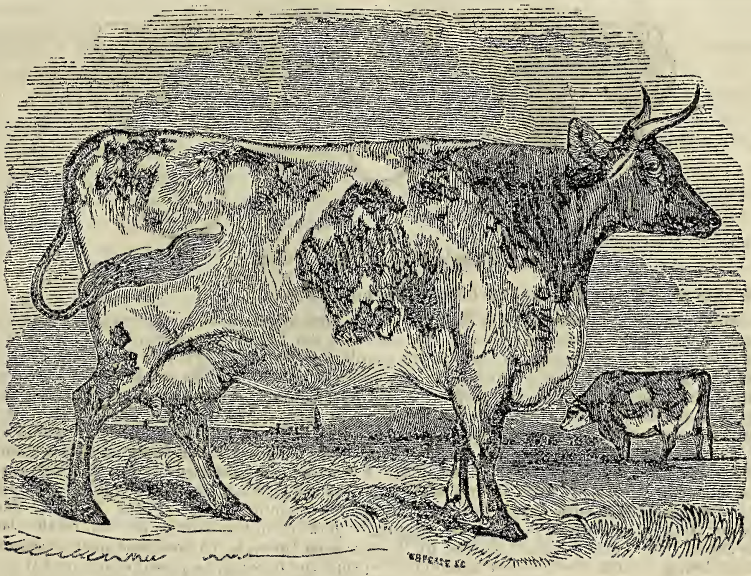
We plead guilty, in some degree at least, to publishing communications on both sides of disputed questions, and freely acknowledge our inability to decide on all the points submitted to our readers. Take for instance, the question of our correspondent about subsoil plowing. We know that on some soils, it is not only considered by scientific men, but has been proved by practice to be highly beneficial. In some instances, but so far as we have heard they have been but few, it has proved of little or no value. The writer says the farmers in his neighborhood do not subsoil. Have they tested it by experiment? If not, upon what ground do they condemn the practice? This and a hundred other questions, can only be settled by a multitude of experiments in different parts of the country. It is a great mistake to suppose that one experiment, however carefully tried, is to settle these disputed questions. What may prove successful in one instance, may, in a different soil and climate, be a failure. We endeavor to give facts, and theories too, from all parts of the country, leaving it for our readers to select and adopt only what commends itself to their judgment as appropriate to their circumstances and soils.

A Durable Fence.

A durable, cheap and convenient fence may be constructed somewhat after the manner of building gravel houses, which have been brought into notice by Mr. O. S. Fowler of phrenological notoriety, and which were noticed in the issue of *The Country Gentleman* for June 15th of present year. Mr. Markham, whose experiments in building house-wall, were noticed in that issue, has informed the public in the Sept. No. of the *Michigan Farmer*, that he has fences made in a similar manner, which have stood for six years, without any crumbling, cracking or decay of any kind. To all appearance he says they are harder than ever. In building fence-wall, he uses one-third water-lime. He digs down about one foot, lays in large stones, banks up to the top of these foundation stones, and then begins his gravel wall on this foundation. He uses boxes to confine the mortar until it becomes stiff or hard, in the same way as when constructing house wall. He makes the mortar quite thin, and then crowds in all the stones, large or small, which can be conveniently come at. To two bushels of stone lime, he puts about forty to fifty pailsful of water, and one bushel of water-lime. These he stirs and mixes well, and then adds forty-five to fifty bushels of gravel,—less when the gravel is fine, and more when it is coarse, as the finer the gravel, the more lime is necessary to make a good cement. Mr. M. has made fences in this way with lime alone, without the addition of water lime, but finds that they do not stand well.

To Kill Liveforever.

Eds. Co. Gent.—Tell your correspondent, H. Stone, if he wishes to kill Live-forever, to dig it up root and branch, and either burn or drown it. Having had some experience with the "animal," I have come to the conclusion that this is the only way to eradicate it. The top will often make a growth of several inches in the center of a hay-mow. Cattle will not eat it, and it will stand strong brine, applied boiling hot, without appearing to suffer in the least. I waive all claims to the offered premium. Helderberger. *Westerlo.*



The Yorkshire Cow

The above is a good specimen of the old Yorkshire cow, exhibiting the characteristics of the Holderness and the Durham combined. They were deep-milkers, and twenty years ago occupied almost exclusively the stalls of the large milk establishments for the supply of London.

Mediterranean Wheat.

I have no antagonism to Mediterranean wheat; but as my experience and observation are directly opposite your correspondent's "A," and the gentleman quoted, Mr. Moore of Michigan, and also of Mr. Lee of the Genesee Farmer, I cannot forbear stating it, although in a former article, on the "Culture of Wheat," somewhat of my experience was detailed. I will not answer, item for item, "A's" quotations and conclusions, but, with this simple preface, difference of climate or culture may account for the variation, give a few facts. Mediterranean wheat is no earlier than the various kinds of white wheat with which I am familiar, for it has been sown and harvested the same day with the white. It is as much affected by the weevil,—is not so good generally to yield, and is more liable to smut, rust and chess, which grows more natural with it, than with any other. It does not make so much fine flour as the varieties of white—has more bran however, and requires more skill in baking, making a quality of bread but little better than rye. Our millers pay from one to two shillings per bushel less for it, and I believe get rid of it by mixing with better.

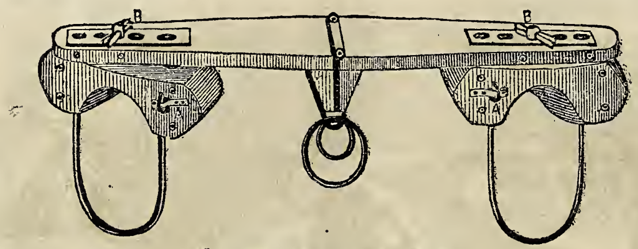
My candid opinon is, if you cannot by good culture and early sowing, raise white wheat, then give up its cultivation, for the present at least. I have sowed nothing this fall but Genesee white, having heretofore always raised some Mediterranean. F. D. C. *Charlton, N. Y.*

Our correspondent's experience with Mediterranean wheat differs, we are inclined to think, materially in some respects from that of others who have grown it. We have always supposed it to be more hardy, and less subject to injury from the weevil than most other varieties. We shall be glad to hear the views of others who have grown it.

Cheap Food for Pigs.

The past season of extraordinary drouth has suggested some valuable experiments, one of which, although at present a little out of date for most farmers, may still be of use to some, and it is believed that they may generally adopt it with much advantage another year.

In consequence of the extreme scarcity of both grain and green pasture, *corn-stalks* which had been sown for fodder were used to great advantage in the following way. They are first cut up as finely as practicable by means of a straw-cutter, and then mixed with the kitchen slops for a short time, with a portion of bran or other ground food added. There should not be too much slop or water, or so much as to make the mixture liquid, but enough to cause the meal to adhere and cover the chopped stalks. Corn-stalks which have been sown so thickly as to form no ears, contain a great deal of sweet juice, and are highly nutritious,—probably as much so as the same amount of green corn in the cob, although not so tender,—while for *cheapness* this kind of food far exceeds any thing else of the kind that can be hadl ate in summer. Such farmers as may have late sown corn, may still avail themselves of its use in the way we have described, and if taken before too mature, they may form a just estimate of this mode of feeding, for adoption another year.



Vose's Patent Ox-Yoke.

The advantages of this yoke are thus set forth, by its proprietors:

In this yoke the neck blocks are separate from the beam, and attached to it by strong bolts passing from an iron thimble or socket in the block up through the center of the beam, as represented at the letter B. This iron thimble or socket is an improvement upon which application for a patent is now being made by Mr. DEDERICK. This yoke has five decided advantages over all others: *First.* By the neck block accommodating itself to whatever movement of the ox, it is impossible for his shoulders ever to become sore or broken. *Second.* It does away with the evil arising from one ox stepping in advance of the other; as, by the moving of the blocks, the weight must under all possible circumstances, fall equally on both oxen—except, (which is the *Third* advantage,) when desiring to favor one you move him one or more holes farther from the center than his fellow. *Fourth.* By moving the neck blocks into either of the five holes, (represented by dots in the beam above,) it can be changed at pleasure into a yoke of any width required for plowing, carting, sleighing or hauling; which advantage of itself makes its value equal to two or three of the common yoke. *Fifth.* Bows in this yoke will last much longer than in any other, because the tugging or jerking of the ox does not fall on the bow, but directly on the center bolt. The bows are secured by keys passing through the bows and neck blocks represented at A. A.—there being in each block two or more holes, so that the bow can be raised or lowered at pleasure. To those who are using them they are giving in every particular, (in strength and durability as well as in ease and beauty of operation,) the very highest satisfaction.

This yoke is manufactured by Messrs. DEERING & DICKSON of this city.

Rensselaer Co. Ag. Society.

This society held its annual Fair on the grounds near Lansingburgh, last week. The show was generally good, and more than an average attendance present. It is proper to mention the good fortune of the Society in having obtained so fine a situation for its Shows. We understood that the seven acres on which they are held, with the buildings, &c., which they use, already erected, were purchased by them for $5,000,—while the cost to their original owner was $13,000; and that the last remnant of the debt contracted in their purchase has been just liquidated. The accommodations for exhibitors are very good, and every portion of the space is well used.

CATTLE.—GEO. VAIL, Esq., a veteran in importing and breeding cattle, exhibited several fine animals among which was his recently imported Devon Bull, "May Boy," bred by J. T. DAVY, Editor of the Devon Herd Book. "May Boy" is a beautiful animal, about 2½ years old, of excellent pedigree, both his sire (Exeter) and his grand sire (Baronet) having taken first prizes at the shows of the Royal English Ag. Society. We noticed also the Durhams shown by G. W. OSTRANDER of Lansingburgh, and the Durham Bull, North Star about 3 years old, shown by Mr. HASWELL of Hoosick. There were a number of other fine Durhams exhibited. There was a large show of *Matched Oxen* on the ground, including several fine pairs and teams.

There was not a very large show of HORSES. We noticed especially the pair of Matched Horses shown by M. FILE, of Brunswick, and a beautiful 3 year old stallion, "Nimrod," shown by HUGH RANKIN, of Troy. C. O. PERHAM of Troy, exhibited also a good pair of Horses.

The principal Exhibitors of SWINE and SHEEP were, —of the former, Messrs. Vail, J. M. Ward, E. M. Van Alstyne, Wm. Lape, and J. Bill. The breed shown was chiefly Suffolks; and Mr. Bill's Boar, which took the first prize, was no ordinary animal. Of the latter, Messrs. M. J. Hayner, Schaghticoke, W. McIntosh, D. S. Green and R. C. Derrick, Brunswick, and N. Brownell, Pittstown, were the chief exhibitors. Mr. J. Haswell received the first premium for the best fine wooled Buck, also for the best pen of 5 Ewes.

The Exhibition of POULTRY was larger and better than we had expected; Messrs. J. M. Ward, H. Boston, S. Osborn, G. C. Deyoe and J. F. Morris, Lansingburgh; S. Cross, Hoosick; M. Herrington, Pittstown, and W. C. Ball, Troy, were among the exhibitors. Mr. C. Bontecue, Lansingburgh, had a fine display of fancy Pigeons, beside other good Poultry.

The show of FRUIT was very good. Mr. A. Briggs, Schaghticoke, had a considerable collection; but that of S. E. Warren, Esq., Troy, was unusually large and fine. We noticed his lists of 34 varieties of Apples, 26 of Pears, 13 of Peaches and 7 of Plums. Mr. W. also exhibited Green-house plants, &c.

Wm. Newcomb of Pittstown, beside some fine Fruit and a cage of beautiful Muscovy Ducks, contributed about 300 varieties of FLOWERS; of which the chief were 80 or 90 distinct varieties of Verbenas and some fine Asters and Dahlias. E. M. Van Alstyne of Greenbush had a fine display of Dahlias, and Mrs. J. T. Van Namee, of Pittstown, a large variety of cut flowers and beautiful Floral Designs.

Messrs. H. Tallis, Greenbush, and J. A. Mather, Schaghticoke, were among the exhibitors of VEGETABLES; but the show of Mr. J. B. Ford of Troy was the largest, and perhaps the finest present.

Influence of Ammonia on Vegetation.

Translated from the French for the Country Gentleman,

BY S. W. JOHNSON.

[We are greatly indebted to our friend, Mr. JOHNSON, who is still pursuing his chemical studies under Baron LIEBIG at Munich, for the following translation of an important paper published in the Proceedings of the Academy of Sciences at Paris, on "the Influence of Ammonia in the air, upon the Development of Plants, by VILLE." It is upon investigations like this, conducted by careful and competent men, that we must rely for any real progress in the Science of plant culture.]

I. When ammonia is added to the air,* vegetation displays a considerably increased activity. The influence of this gas, when constituting 4-10.000 of the weight of the air,—becomes visible after 8 to 10 days; and after this period manifests itself with constantly increasing intensity. The leaves, at first pale green, assume a deeper and deeper color—there comes indeed, a time when they are almost black—their stems are long and upright, and their surfaces large and glossy.

At the end of vegetation, it is found that the produce is far greater than in the same plants which have grown in pure air; the plants weigh more, and contain almost double the amount of nitrogen.

The action of ammonia on vegetation, is accordingly two-fold—1. It greatly promotes the growth of plants; and 2. It makes them richer in nitrogen. This is shown by the results of the following experiments in which two equal quantities of seed were vegetated—the one in pure air, the other in an atmosphere mixed with 4-10.000 of ammonia.

In 1850, the harvest, (kind of plant not given) thus obtained in pure air, weighed (dried at 280°) 990 grains—that in the ammonia atmosphere, 1,658 grains. The first contained 19½ grains of nitrogen—the latter 65½ grains.

In 1851, a harvest (kind of plant not given) obtained in pure air, weighed 1060 grains, and contained 7½ grains nitrogen—the same crop grown in ammonia atmosphere, weighed 2086 grains, and contained 23 grains nitrogen.

In 1852, 30 kernels of wheat vegetated in pure air, and produced 183 grains of straw and 47 kernels, which weighed 170 grains. The same number of kernels grown in air containing 4-10.000 of ammonia, yielded 339 grains of straw, and 75 seeds which weighed 290 grains.

The straw grown in pure air, contained 7-10 grain of nitrogen—that produced in the ammonia atmosphere, 2½ grains.

The seeds grown in pure air, contained 3½ grains of nitrogen—those which vegetated in the ammonia atmosphere, 10 grains.*

II. In addition to this general effect, ammonia produces others; which, though variable, and dependant upon special conditions, are nevertheless highly interesting.

It is not only possible, by means of ammonia, thus to exalt the vegetative development, but to change its order; in fact, to check some functions, and to increase the size and number of certain organs.

When the application of ammonia is badly conducted, it may lead to injurious results. Those which occurred in the course of my investigations, seem to me to shed an unexpected light upon the mechanism of vegetable nutrition; they have at least indicated to me a method by which gaseous ammonia may be practically applied to facilitate vegetation. It is of course true, that this can only be the case in green-houses and the like. I shall hereafter mention to what degree the application may be extended.

III. Upon plants, several months before their flowering, ammonia exercises no influence beyond causing a general exuberance of growth. The usual course of development is undisturbed. It indeed often happens that plants, which do not blossom in pure air, and on a poor soil, not only come to flower, but also fully fructify on the same soil, but in an ammoniacal atmosphere. If the circumstances of the experiment are a little altered—if the plants have arrived at their blossom-time, when first exposed to the action of ammonia, its effects are entirely different.

Under these new conditions, the production of flowers is delayed, and the vegetation unfolds itself in a new direction. It might be said that the plant goes back, and lives over again the period it has just finished. The stem ends itself, and branches out in all directions; it puts forth numerous leaves, and then, if the season be not too far advanced, it yields flowers, which however are all unfruitful.

If the experiment be made with the cereal grains, whose tubular stems do not permit the extension of branches, then the growth of the already headed stalk is checked, and the root shoots out many sprouts which soon attain a greater height than the mother plant. Also in this case no fruit is perfected.

IV. All these phenomena are fully in accordance with the general laws of Physiology. All organized structures are subject to a law of compensation, which maintains harmony between the various functions, and regulates the development of the organs. When one organ attains unusual perfection, it is at the expense of another; and when one function is exercised with too great activity, another must fall below the normal standard. If the organs of *vegetation*, i. e. the stem, branches and leaves, manifest a luxuriance of growth beyond a certain measure, it happens at the cost of the organs of *reproduction*. The flowers are barren; the plant bears no fruit.

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* In the account of these experiments from which I translate, it is not stated whether, by the term *pure air*, is meant air deprived of all ammonia, or air pure from any artificial admixture, i. e., as it exists under ordinary circumstances. This, however, is unimportant. The experiments were necessarily made on a small scale; yet they were carried out with such care, and agree so well with each other, as to be entitled to confidence. TRANS.

* The experiments of Ville, were conducted in large glass chambers, the air and moisture of which were constantly renewed, so that the circumstances of the included plants were nearly as favorable to their growth, as they could have been in the free air. The chambers were so arranged, that the composition of the air before entering, and after leaving them, could be accurately ascertained, and any desired amount of any gas, as ammonia, could be introduced at pleasure. S. W. J.

In my experiments, certain plants which had grown until flowering-time, were at that period brought into an ammoniacal atmosphere. The ammonia caused them to put forth a certain number of new leaves, the formation of which destroyed the equilibrium between the vegetative and reproductive functions, so that the former predominated.

V. The influence of ammonia is unequally active in different periods of vegetable growth. Its effects are more evident between germination and flowering, than from the latter to the ripening of the fruit. This difference is easily understood.

Until the time of blossoming, the whole activity of the plant expends itself in the foliage. Under favorable influences are formed a large number of leaves, which, as organs of absorption, unite their action with the cause that led to their production; they owe their development to the action of the older leaves, and lend their offices to the formation of new ones.

From the blossoming forth, on the contrary, the entire energies of the plant are expended upon the reproductive organs. A part of the leaves wither and fall off. Those which still grow, do not nearly attain the size of the older ones. Consequently the surface of absorption has diminished, and ammonia can no longer be taken up by the plant to the same extent as before. On the other hand, after flowering, the plant approaches the limits of its growth. These two considerations explain the fact that the influence of ammonia is decidedly less in the second stage of growth than in the first.

VI. Ammonia in the gaseous form, will unmistakeably find application in hot-houses. The results of my experiments are so striking, that the question of its practicability may be considered as definitely settled. I have produced extraordinay luxuriance of vegetation in a hot-house containing orchidaceous plants, by adding to the air 2-10.000 of its weight of ammonia—*i. e.* one-half the quantity employed in the above experiments.

VII. During the dry heats of summer, ammonia is apt to act injuriously. It is therefore well to discontinue its use in the months of June, July and August. The bad effects which I have observed, have always arisen under the same circumstances, and with characters so constant, as to indicate a well defined phenomenon. They are especially noticeable in plants whose vegetation is considerably advanced. The leaves become yellow, contract, and dry up; notwithstanding the atmosphere is saturated with moisture. The evil spreads over nearly the whole plant, excepting a certain number of the uppermost leaves, and the plant dies. The cause of this appearance is a wrong relation between the quantity of nutritive material absorbed by the leaves, and that taken up by the roots.

In general, the roots are especially destined to provide the plant with *mineral* matters. When the absorption of these passes certain limits, the plant is unable to appropriate them, and they are deposited in white, salt-like crusts on the surfaces of the leaves. This may often be observed on the broad leaves of the melon tribe, when dry weather succeeds a strong rain.

When by the co-operation of various circumstances, the activity of the leaves exceeds that of the roots, the absorption of *organic* matter predominates. From want of a sufficient quantity of inorganic (mineral) matters, the organic elements cannot be disposed of in the natural manner. A remarkable phenomenon now appears. What the roots of the plant are not able to furnish, for the development of the younger growing organs, the plant seeks to provide from its own structure; there occurs a reabsorption of inorganic matter, from a certain number of old leaves, which accordingly wither and perish. The disturbance that the vegetable organism suffers in this way, is so great that in time the whole plant dies.

In nature, frequent examples of this kind occur. If a Portulacca stem in flower, is cut from the parent plant, and laid on a sheet of paper in the shade, the growth continues, the seeds are formed and even ripen. In this case the inorganic substances of the seed cannot come from the soil; they must be derived from the tissues of the plant itself. Quite similar is the case I have mentioned above.

VIII. To recapitulate:

1. 4-10 000 of ammonia, added to the atmosphere, decidedly favors vegetable growth.

2. Harvests, yielded by plants grown in such an atmosphere, contain much more nitrogen than an equal harvest produced in pure air.

3. If the use of ammonia is begun two or three months before the time of flowering, the vegetation follows its usual course of development, and there results no disturbance of the succession in which the various organs of the plant are unfolded.

4. If the application be commenced just as the plant is about to put forth flowers, the blossoming is partially or entirely checked. The plant produces numerous new leaves, but no fruit.

NOTE BY THE TRANSLATOR.

The author promises a detailed account of his application of ammonia in green-houses, but no notice of it has yet met my eye. There appears to be no doubt that it may thus be employed, whether with greater advantage through the air than through the soil, is perhaps not fully settled. An arrangement to charge the air of a green-house with ammonia, to a suitable extent, might be constructed without great expense, and would probably be very advantageous in forcing succulent vegetables like asparagus, which flourish under very heavy manuring.

Whatever may prove to be the direct practical value of this discovery, it is certain that the remarkable results obtained will attract attention to this subject, and we may hope before long to possess more definite knowledge concerning the action of manures.

These experiments indicate in a most striking manner the importance of *ammonia* as a fertilizer. By the use of maures yielding ammonia, not only is the absolute quantity of a crop increased, but the relative amount of nitrogenous material therein is also considerably heightened. When we bear in mind the perfectly established fact, that other things being equal, the ability of a man or beast to sustain exertion, is proportionate to the amount of assimilable nitrogenous bodies (albumen, fibrin, casein, &c.) in the food, we see how important it is to be in possession of means of increasing this proportion in vegetable food, in most kinds of which it is too small to support a laboring man to the best advantage.

The injuries resulting from the excessive use of guano, and other ammoniacal manures, are of a character similar to those mentioned by Ville, and without doubt are due to the same cause. S. W. J.

Guano and Stable Manures.

Gentlemen—In reply to the call made upon me in the last No. of your valuable journal, (*The Country Gentleman*,) I take pleasure in stating that at the time my essay was written, guano was sold at $46 the long ton; and taking this as the basis of my calculation, I stated that barn-yard manure should be applied to the land adjacent to the place where it was manufactured, " because the mere cost of hauling would be as great as the cost of an amount of guano which would produce an equal if not superior effect."

I still contend that this is true in regard to the poor worn-out land in this section, for which guano seems peculiarly adapted, because the expense of hauling 40 horse cart loads of stable manure any distance over half a mile, will be at least $5,00, and that sum expended in guano at $46 the long ton, will produce a greater effect than the 40 loads of stable manure. Whether the effect will be as lasting is another matter, which we must determine by practical experiments I trust no one will understand me as under-valuing stable manure, because my argument was merely intended to show the importance of using the stable manure, which is a bulky article, near the place of manufacture, and thereby save the expense of labor, which consumes so much of the profits of all farming operations. My argument was also founded upon the assumption, which I think correct, that the cost of spreading the 40 loads of stable manure would cover every expense of the guano except the first cost of the article.

In regard to the manner of applying it, I will state there is great difference of opinion, and therefore I will give you my own method, without claiming it as the best. I never apply it to any but fall or winter crops, because it requires a great deal of moisture to bring out its full effects, and I prefer having it in contact with the seed, but a very short distance from the surface, although others contend it should be plowed under very deep.

I regret that I am unable to give you more valuable information, and trust that some one, who has had more experience in its use, will reply to the interrogatories of your correspondent. Very respectfully,

CHAS. B. CALVERT.

Riversdale, Md. Sept. 25, 1854.

Albany County Agricultural Society.

THE SECOND ANNUAL FAIR.

The Exhibition took place on Washington Parade Ground in this city, Tuesday, Wednesday and Thursday of last week. The ground comprising ten acres, was enclosed, and the arrangements for the accommodation of stock and manufactured articles were very perfect. Within a track, half a mile in circuit, were three large temporary buildings, one of which was devoted to Fruit and Flowers, another to miscellaneous articles, and the third to the handiwork of the ladies. At one end of the grounds, the horses were ranged, and the cattle at the other. The coops for poultry occupied a position on one side, and the pens for sheep and swine were placed parallel with the fixtures for cattle. The limited space which we can devote to a notice of the Fair compels us to speak more briefly than we should choose of the several Departments.

Stock Department.—The number of exhibitors in this department was 184. The display of horses, especially of matched and single carriage and trotting horses was very fine. We have seldom seen a larger proportion of really superior animals at any similar exhibition. Among those worthy of special mention were a span of Draught Horses exhibited by C. V. S. Truax of Albany, and a scarcely less valuable span shown by Putman and Hoyt of this city. A span of Black Hawks, belonging to Richard H. Pease, received the first premium for matched horses for family use, and attracted general attention by their beauty, spirit, and fine action. A span of carriage horses were shown by Gen. John. F. Townsend, which had seen twenty five years of service and still retained the marks of blood and power of endurance. A discretionary premium was very justly awarded them. Wm. A. Wharton exhibited a span of Horses for all work, which received the first premium in their class, and were much admired. Of the single horses of superior qualities, there was no end. Many of these were from the city; still the country contributed its full quota of high-bred and well trained animals. A large number of beautiful saddle horses were exhibited, and the competition for the premiums in this class was as spirited as in any other Very few Societies, as far as we know, offer premiums for Saddle Horses, and we think it would be well if the example set by this Society were generally imitated The display of Horses was the great feature of the Fair, and the crowd that thronged the track seemed to be never weary of watching the splendid animals, equally anxious to make the most of their good points.

The Show of Cattle, Sheep and Swine was very small. This was partly owing to the severe drouth which has made stock look thin, but the meagre display did not do justice to the county. New Scotland and Bethlehem, each, sent ten yokes of working oxen, which it would have been difficult to beat.

The show of Poultry was large, and, with the exception of the display made by the State Poultry Society, was the best we have ever seen. The Shanghais predominated in point of numbers, but there was no lack of specimens of all the choice varieties.

Horticultural Department.—A choice profusion of Fruit, Flowers and Vegetables filled the spacious hall set apart to the purpose. The past season has not been favorable to the production of large fruit, but the quality exhibited was very superior. There were 93 exhibitors in this department, and it would be impossible to do justice to them without particularizing each one. G. W. Luther exhibited clusters of grapes grown under glass which reminded one of the pictures of those which were brought by the spies from the promised land, and those shown by C. P. Williams were scarcely less heavy and finely colored. For grapes grown in the open air, John S. Goold bore off the palm. A large display of plums was made by E. Dorr, J. S. Goold and others, embracing many fine specimens and rare varieties. The Premium for the best collection of apples was taken by E. A. Fitch of New Scotland, and for the greatest variety of pears by E. Corning Jr. For the best White Doyenne and Seckel Pears, John S. Goold received the premium. The best collection of Peaches was shown by H. E. Robbins of Westerlo.

In the Vegetable Department, the show was extensive and superior, more so than usual. There was competition for almost all the premiums offered.

The Hall devoted to Household Manufactures was well filled. Evidences were multiplied that our farmer's wives and daughters have not forsaken the distaff and loom for more fashionable employments. Plain brown linen as fine as our grandmothers wove, and thread as evenly spun, along side of the embroidery and the crotchet work testified that the useful and the ornamental are not antagonistic. Kersey-blankets and rag-carpets did not blush in comparison with the pictures elaborated with the needle, the wax flowers, and the curiously wrought designs in leather. The ladies of the county did themselves great credit in the display of the productions of their skill, and yet they say they can do infinitely better another year.

A building 100 feet by 86 was crowded with manufactured articles of every description. On a raised platform in the center stood eight splendid Pianos. Boardman and Gray, Barhydt and Morange and H. Meacham of this city exhibited instruments of their own manufacture. Messrs. Mayer & Collier showed Chickering's piano, and a piano of a new form, said to possess many advantages over the square instruments, manufactured also by the Chickerings at Boston. Boardman and Gray received the first premium for Pianos made in the county, and Barhydt & Morange, the second.

Some half-dozen sewing machines in operation excited a deal of curiosity. They *seamed* as busy as a bee, and did not grow weary of their work. These machines are coming into quite extensive use, and are said to give satisfaction.

We have not space to speak of the many beautiful cases of Silver Ware, ornamental articles, Daguerreotypes, and specimens of binding which adorned the Hall, or of the Carriages, Wagons and Sleighs which stood outside, or of the great variety of Agricultural Implements exhibited by R. H. Pease of this city and others. The grounds were covered with objects of interest, and the crowds that thronged them were delighted and surprised with the beauty and variety which met the eye on every hand. The everage attendance on Wednesday and Thursday did not fall short of 15,000 persons, and the amount of money received will exceed $3000,. The balance on hand after paying premiums and expenses, will enable the society to offer a larger amount of premiums another year, and ensure its permanence and an increasing usefulness.

The address was delivered Thursday by S. B. Woolworth, L. L. D. of the State Normal School. It was an excellent and timely production, stimulating farmers to think as well as work, and setting forth the advantages of an intelligent culture of the soil, and the importance of employing all the facilities of the day for improvement.

After the award of premiums, four ladies competed for the Prizes offered for Equestrianship. The ladies rode well, and the assembled multitude gazed with the most intense interest. Everything was done decently and in order, and at the close of the riding, Gen. Viele of Troy, the Chairman of the Committee of Judges, addressed the ladies in complimentary terms, which drew forth rousing cheers from his auditory. This over, the thousands dispersed quietly to their homes, and thus ended the Second Annual Fair of one of the most prosperous and promising agricultural societies in the State.

Black Knot on Plum Trees.

Messrs. Editors—Facts are everywhere admitted to be better than theories; and observation is the fruitful mother of the former, while speculative animus often creates the latter.

Wm. Smith, Esq., of Ballston Center, a gentleman of close observation and of much practical skill, informs me that a year ago all his plum trees were badly affected with the black knot, except one, growing with the rest and having the same general treatment. In looking about for a specific cause, he found this particular difference; at the base of the unaffected tree was a large tomato vine. Making note of the fact, this year he removed all the diseased branches from his trees, and around a portion of them set out the tomato plant, leaving part uncared for. Now mark the result. Those with the tomato at the roots, have *no knot whatever*, while those not treated in this way, were *full* of black bunches, the same as last year.

Mr. Smith offers no analytical explanation, but simply gives the public these *facts*. F. D. C. *Charlton.*

Answers to Inquiries.

Lime on Meadows.—(*Wm. Storer, West Hartford, Ct.*) We need experiments to determine the value of lime as a top-dressing for grass lands. In some localities it has been considerably used, with some advantages to the grass, but chiefly with the intention of benefitting subsequent crops. It often acts beneficially on meadows, like ashes, in destroying mosses, and would probably in the case referred to. It should be first slacked, to admit of even spreading. Oyster shell lime is equal to any for this purpose. It would be best for our correspondent to try the experiment on a moderate scale, with 50 or 100 bushels per acre, applied early in spring; not trusting his eye, nor guess-work, for the results, but submitting them to weighing and measuring. It is not probable they will be very striking, if decidedly perceptible. In some particular instances, or peculiarities of soil, lime may be of much advantage, but as a general thing there is nothing like nitrogenous manures. If the land needs underdraining, as a part appears to in the case reported by our correspondent, this operation will greatly benefit the crop both in quantity and quality; after which, and not before, manure will produce a decided result, or exert its full powers.

Peat Ashes.—I have a pretty extensive swamp which I am endeavoring to bring into cultivation. I wish to be informed if the ashes obtained from burning the bogs, cut on it, will be of benefit to the soil if spread over it, or if there will be more advantage in spreading them on the surrounding upland.

I had supposed that these ashes would be good for all kinds of soil, and yet I have been led to have some doubt about it, arising from an experiment on a very small scale, which I made some 3 or 4 years since, and which did not seem to give so favorable a result as I had been led to expect.

I shall be much obliged if you, or any of your correspondents, who may have experience in this matter, will give me the information which I seek, it being of considerable importance to me to be put on the right track,—the quantity being large. Yours, &c. Henry Sheldon. *Tarrytown, Westchester Co., Sept.* 13.

We have very few if any accurate experiments in this country in relation to the subject. Peat ashes are inferior in quality to common wood ashes. In England they have proved useful to clover, lucerne, and similar crops, apparently from the amount of gypsum they were found to contain. We should think these ashes would be decidedly more beneficial if applied to the soil of *well drained* bogs, than in upland. But experiment will be the best test. On wet bogs, they could be of very little use, as they would be soon dissolved, and carried off. Can any of our correspondents furnish any facts on the subject?

Millet.—(*W. Storer, West Hartford, Ct.*) Millet is a good crop, but the fact of its introduction long since without extensive culture at the present time, does not speak strongly in favor of its superiority to other crops. It will afford one or two tons of fodder per acre, and sometimes more, which is fully equal to good hay. The seed, which is a capital food for poultry, and valuable for other animals, usually amounts to about 25 bushels per acre. In rare instances 60 or 70 have been produced. Like other crops, it does best on rich soils, and will succeed on such as will raise good corn and barley. A neighboring farmer, who has raised it to some extent, thinks a peck of seed enough for an acre, but we observe that some authorities recommend over a bushel—quite a difference certainly. We are unable to say what amount would be likely to yield the greatest amount and best quality of fodder, and the largest crop of grain. The results with Indian corn and timothy indicate that a large quantity of seed yields not only a larger crop, but of better quality, being of finer, softer, and more nutritious growth. Millet should be sown about the time of corn planting, but will ripen a crop if somewhat later.

Prices of Pears.—Can you inform a subscriber to your useful paper, where to find a market for pears, and what prices such kinds as the Virgalieu, the Sekel, the Buerre-Bosc, Buerre Diel, Bartlett, and others, will bring? I have about twenty bearing pear trees of the above varieties and others—some large size and fine juicy fruit—the names of which we have lost. Such fruit, in the country here, brings no better price than the common pears. which are sold at from 50 to 75 cents per bushel. *Otsego, N. Y. Sept.* 21, 1854.

The price of Pears in this city, as well as in New-York and Boston, depends in a great measure upon the manner in which they are brought to market. In answer to our inquiry of several fruit dealers, as to what they would pay for such pears, they say—"We never buy pears without seeing them—they may be worth $1 or $4 per bushel." Well known varieties, like the Bartlett and Virgalieu, of good size, if properly picked and assorted, and sent to market in a sound state, will readily command $3 to $5 per bushel. We refer our correspondent, and all others who have pears to send to market, to an article published in the Country Gentleman of last week, (p. 187.)

Hedges.—(*A Subscriber, Troy, N. Y.*) There is no kind of thorn, properly so called, that can be wholly relied on for hedges. The English has succeeded well in some places in this country, and appears to do better in the extreme northern portion of the Union than in the Middle States; but every where it is occasionally liable to a sort of disease or blight, that may destroy it after it is grown to a hedge, and occasion severe loss and disappointment to its owner. The American species, known as the Washington and the Newcastle thorns, succeeded well for many years, but they too, were found to be attacked by diseases and enemies, and they are at present given up.

There is but one plant that now appears to be just the thing we want for Hedges. This is the Osage Orange. Although somewhat liable to be winter-killed at the tips of its branches, we have never known the roots and larger branches to suffer; and in a thick hedge, with the moderate growth that such a thick growth must have, our severest winters will scarcely affect it. And it so happens, that nipping the tips is only beneficial to the hedge, operating in the same way as a shearing—an operation too often neglected in raising hedges. After many years trial, we are satisfied it will succeed perfectly in any localities where peaches can be raised, or Isabella grapes ripened.

It is raised from seed, but as this requires skillful management, our correspondent will do best to obtain the plants from nurserymen, which he can do at five or six dollars per thousand. The best way, is to plant on the line of a ditch, made for this purpose, filled with mellow earth, the ditch keeping the soil dry, and of course *enabling the plants to withstand the frost much better than if soaked with water.*

If kept *well and constantly cultivated*, such a hedge will afford protection against cattle and horses in about five years, notwithstanding the heading down each spring for a few years, at successive heights, which is indispensable to a good and compact hedge. Without cultivation, the time required will be much longer.

Nothing can be better than an Osage hedge for a fruit garden, as from the innumerable sharp thorns, no fruit-stealer would be likely to undertake more than once to pass such a barrier, and he would probably remember the effort for a long time.

W. C. S. Jr., *Claremont, N. H.*—We would by no means advise you to go to the "celebrated farm," to which you allude, if your object is to learn how "farming can be made profitable." You can find much better examples nearer home. We are too apt to consider things "far-fetched," of greater value than those immediately around us. For lessons in practical farming, we can refer you to J. W. Colburne of Springfield, and to the Messrs. Tufts of Wardsboro, Vt., men who can teach you how to farm so as to make the business both pleasant and profitable; and we doubt not but that, were we acquainted in your vicinity, we could refer you to many others whose instructions would be equally useful.

Notices of Fruits.

Kirtland Pear.—We have been favored by Lewis F. Allen, of Black Rock, with specimens of this fine pear, grown on his own grounds. They were about half the size of those we had formerly seen from Dr. Kirtland, doubtless in consequence of the drouth. They were found, however, to maintain fully their excellent flavor, and were quite equal in quality to the best specimens of the Gray Doyenne, with rather more of the peculiar *Seckel perfume.* These are the first, so far as we know, that have fruited in this state.

The Ford Apple.—Specimens of the apple, to which we have given this name, have been sent us by Daniel Ford of Canaan, N. Y., who has also furnished a short history. It has been known for some fifty years, the original tree standing on the farm of Capt. Daniel Lovejoy, in Canaan, Columbia county, N. Y. It is now dead; while standing it was large and lofty, with a thick upright top, and long slender branches. It has become extensively cultivated in that and adjoining towns.

The following is a description of the specimens received:—Large, nearly round, usually with a very slight conical taper towards the apex; color a rich yellow; stem long, bent at a sort of joint in the middle, set quite in a shallow cavity; basin small, plaited; flesh yellowish white, solid, moderately tender, with a high, rich, rather acid flavor. It is reported to us as ripening successively through most of autumn, and with care may be kept till mid-winter. We cannot speak decisively of its merits from a few specimens, but are inclined to think it deserves the American Pomological Society's distinctive character of "very good," although too acid to be agreeable to many. It is unquestionably a fine stewing apple; and if a *good bearer*, with uniformly fair fruit, (of which we are not informed,) it would be doubtless worthy of more extended cultivation. If our correspondent will send grafts this fall or winter, we will distribute them among pomologists for a further trial of its merits.

The Druid Hill Peach.—It has now been several years since this valuable late peach has borne with us, and it has proved uniformly excellent through all the varying seasons. It ripens about the same time as Crawford's Late, and is superior to this, to the President, Morris' White, and other late peaches, in flavor. Average specimens this year measured seven to seven and a half inches in circumference, and although the stone is small and thin, so thick is the flesh that it gives the peach rather an ovate form—the model form for peaches. We have given specimens to different pomologists, and they have uniformly pronounced it the best late peach of its season. This is the sort that is placed by Elliott's late work on fruits, on the rejected list, as unworthy of any cultivation whatever.

Northern Muscadine Grapes.—We have received two boxes of the fruit of this new variety from E. Fowler and P. Stewart, of Shaker village, New Lebanon, Columbia county, N. Y. The specimens first received were somewhat injured by conveyance, and we were unable to judge properly of their merits. The second box contained bunches in a good state of preservation, which afforded a more favorable sample of their quality. They were carefully examined and compared with fruit of the Diana, and of the Isabella ripened on the warm side of a building, but were decidedly inferior to both of these in quality. This sort appears to be an improved seedling of the large native Fox grape, and is claimed to ripen a month earlier than the Isabella; if this is the case, it may prove valuable in northern latitudes, especially to those who like the peculiar flavor of the Fox grape. When these were received, however, the Diana, growing in a wholly exposed situation, (which usually matures two weeks before the Isabella,) was fully ripe, and is far superior in flavor.

The seedling grape, sent with the above, and designated "Black Cluster," (wholly different from the true Black Cluster, an old sort,) was not equal to the "Northern Muscadine," and we should think unworthy of cultivation, while better sorts are so easily to be had.

A box 12 inches by 11-2 inches square, and 8 inches deep, will contain half a bushel.

Extracts from our Exchanges.

EXPERIMENTS IN WHEAT CULTURE.

Cuthbert W. Johnson, a well known English agricultural writer, in an article on the "Wheat Crop," in the Sept. No. of the *Farmer's Magazine*, says:

Now there are one or two facts which have been produced within the last two or three years, which are well worthy of the farmer's attention—not as offering certain rules for our imitation on all soils and in every situation, but as affording valuable suggestions for new experimental courses of inquiry. It is pretty certain that the best state to which the soil should be brought for the reception of the seed-wheat, is not in all cases well determined. At the July gathering at Mr. Mechi's farm, some fine specimens of wheat ears were produced by Mr. Piper, of Colne Engaine, grown on land which had not been plowed for several years, and yet had, with the aid of top-dressings of soot and other artificial manures, produced good crops of wheat every year: here was the result from an undisturbed soil. On the other hand, we have the equally successful, yet opposite practice of Mr. Smith, of Lois Weedon, who fallows for wheat every other year—still growing wheat and wheat only, year after year. His practice he briefly describes as follows:—"I divide my field into lands 5 feet wide. In the center of each land I drop or drill my seed in triple rows, 1 foot apart, thus leaving a fallow interval of three feet between each triple row. When the plant is up, I trench the intervals with the fork easily, taking my spits about 3 inches from the wheat; and at spring and during summer I clean them with the blades of the sharp-cutting horse-hoe, and keep them open with the tines of the scuffler. Every year, in short, I trench and cultivate 2½ feet out of the 5 for the succeeding crop, and leave the other 2½ for that which is growing. One moiety of each acre is thus in wheat, and the other moiety fallow; and the average yield of that half acre is 34 bushels, surpassing the average yield of a whole acre on the common plan." Why wheat should be thus grown for a series of years on the same land with success in Essex and in Northamptonshire, and in one place by constantly stirring the soil, and in the other locality by never plowing, but by merely hoeing the seed in, and hoeing it afterwards for the removal of weeds, certainly seems to be phenomena worthy of our careful study, when we are considering the state of the soil the best adapted for the growth of wheat.

THOROUGH TILLAGE.

Prof. Nash, editor of the *Conn. Valley Farmer*, in his Sept. No. gives a variety of notes gathered from farmers whom he had recently visited. We copy one of them:

Our first gleanings are from a farmer in Worcester county, who showed us a three acre lot, once intolerably stony, now cleared of stones and trenched to a depth of sixteen or eighteen inches, and the soil to that depth made like a rich garden mould, by working and manuring. This lot is set to apple trees, now seven years from the seed, and already bearing considerably, many trees having something like a bushel of the choicest varieties of apples. Two acres of the lot are now into onions. The other acre has given a crop of barley, and is to give another of turnips. The onions are in drills, 12 or 14 inches apart, and if we are any judge of such matters, they must yield over a thousand bushels from the two acres, and we should not think it strange if the yield should be nearer two thousand. We have grown them on small patches at the rate of very nearly a thousand bushels to the acre, but we have never seen a heavier growth than this whole field seems likely to reach. The owner declares that he is managing this field with a view to test the question, whether three acres cultivated in the best manner, cannot be made to give a ration of profit over all expenses of cultivation equal to the average profit on farms of a hundred acres, in that county, cultivated in the ordinary way. His views at first struck us as extravagant, but on learning what crops he had taken from that field and seeing his prospects for large quantities of choice fruit in coming years, we were constrained to admit that he probably will obtain a greater net profit from those three acres for a succession of years than is derived from some farms of a hundred acres. His way is to charge the field interest on its original value, to charge it for all the manure and labor, and to credit it by the selling price of whatever is sold from it and a fair market price for such produce as may be consumed at home. This farmer would be the last to speak irreverently towards Him, who gives and withholds the rains at his pleasure; but yet he believes deep and rich cultivation to be all but an absolute guaranty against harm from excess or deficiency of rain—is about as fearless of drouth as the resolute school boy, clad in wools and firs, would be of cold in skating time. With some traits of his farming we were exceedingly delighted, and we hope to revert to them at some future time.

CHEAP ICE-HOUSE.

The following plan of a cheap and convenient ice-house—one which every farmer can afford to have—was furnished to the Rural New-Yorker, by Mr. E. Marks of Onondago county.

Make a box eight feet square, by nailing hemlock planks which are two inches thick, on to hemlock scantling. Let one side of the box be seven feet high, and the side directly opposite ten feet high. This gives a roof eight feet long, with a slant of three feet. It is well to have the roof boards extend over the sides of the box. Double boarding with hemlock makes a sufficient roof. Set this box on the top of the ground, in a dry and shady place, where surface water will not accumulate. No planks are needed on the bottom of the box, but sawdust must be placed on the ground inside the box to the depth of one foot, and over this place loose boards for the ice to lie upon. Cut the cakes of ice two feet square, and build a tower of ice six feet square in the center of your box, (or ice-house, we will now call it,) by laying the cakes compactly together, and filling all crevices with sawdust as you proceed. We have now a six feet cubic of ice, with a space of one foot all around between the ice and planks. Fill this space with sawdust, and cover the top of the ice with the same eighteen inches deep, and you have ice enough secured to last a family through the season. The upper three feet of the side which is ten feet high, should not be boarded up, but left for ventilation, and a place of access to the ice, and this aperture may be enlarged as convenience may require while using the ice, and for more conveniently filling in. About 800 feet of lumber will be required, and the merest tyro in the use of tools, can make it. Fresh sawdust is best, but it may be used a second winter. The dust can easily be washed from the ice at the time of using.

LARGE OR SMALL SEED POTATOES.

By an experiment carefully conducted at the North American Phalanx, the following results were obtained:

1. Large whole seed, 29 lb.. 14 oz., produced 174 lb.
2. Large potatoes cut in halves, 15 lb., 15 oz., produced 124.
3. Large potatoes cut in quarters, 7 lb., produced 98 lb.
4. Medium potatoes, whole, 19 lb., 3 oz, produced 146 lb.
5. Medium potatoes cut in halves, 9 lb. 6 oz., produced 88½ lb.
6. Medium potatoes cut in quarters, 4 lb., produced 67 lb.
7. Small potatoes whole, 9½ lb. produced 117 lb.
8. Small potatoes cut in halves, 6 lb., produced 81 lb.

The percentage of small potatoes to the seed used, was greatest in the quartered large potatoes.

Repetitions of the experiment have all been in favor of large uncut potatoes for seed.—*N. Y. Trib.*

Effects of the Drouth.

Messrs. Editors—Much has been said and written upon the subject of the severe drouth of the past summer, yet perhaps a few words on its effects upon vegetation, may not be uninteresting to some of your numerous readers. I, indeed, have been much interested in observing its action upon both wild and cultivated plants, and have noted the general effects upon those observed, numbering about six hundred species or more, growing in six counties in central New-York, and in some of the localities, the drouth has been as severe, and as destructive as in any part of the state, where it commenced early, and can scarcely be said to be finished yet.

The first, and most obvious and conspicuous effect, is the general smaller size of leaves. This has been alike observed on the lower herbs, and on the higher forest trees; in the latter, most especially in those leaves which formed after the middle of June. And this diminution of size has in very many cases modified their shapes, making them generally more angular In those leaves that are *lobed*, as the oak, the indentations are deeper, as if the frame work of veins or nerves had not been well up filled with the *parenchyma* which forms the blade. In those leaves that are notched, or have many angles, the notches are deeper, and the angles sharper. In such as have slight spines at their points, these spines grew larger and more marked in their characters; and on those that had conspicuous spines, as the various thistles, they grew longer and harder.

This same scanty growth was observable also in the leaves of the grasses and the grains. These were narrower, and had an unusual dried up aspect, and this of course has affected greatly the quantity of hay and straw. As plants draw much of their nourishment from the air, through their leaves, these being smaller have diminished the size of the whole plant, and trees have grown less than usual.

Several peculiarities have been observable in the microscopic appearance and structure of leaves, making them approach more nearly those which grow in dry, arid regions. Many species are usually covered entirely or in part, with down or hairs, sometimes conspicuous, but oftener very minute and scattering. This summer all have been more hairy than usual; some species that usually have scarcely any, have many, and others that usually have many have still more. Mulleins have been more woolly, and clover more hairy or downy. On fruits the skin has been thicker; on peaches the down is more abundant.

The time of flowering has also been affected, as well as that of ripening. The flowers have generally appeared earlier, and been of shorter duration, more scanty in numbers, and the colors generally less brilliant. Fruits and seeds have been smaller.

Insects that prey upon leaves, (indeed all parts of plants,) appear to have suffered even where there was enough food, and very possibly, I might say probably, many species have had their numbers greatly thinned, and in this manner the ravages of the drouth may in the end be compensated.

On thin soils, where the rock was near the surface, the foliage of many trees dried up in August, as if scorched with fire, and seem now dead; some are actually so, others, though leafless, or with their dried leaves still upon them, have still vitality.

Of course these effects mentioned, only occur where water has been much scarcer than usual, yet some have been observed in *swamp* species, such as only grow where is always an abundance of this element. In these cases, perhaps the unusual dryness of the air has produced the results, rather than the soil.

Drained lands appear to have suffered the least, other circumstances being equal—a strong argument in favor of thorough draining. Yours truly, Wm. H. Brewer. *Ovid, N. Y. Sept.* 29, 1854.

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Slate for Roofing Purposes.

What shall we use for roofing for our buildings, is a question that is yearly becoming of more importance, as shingles that are generally used for farm buildings are every season becoming scarcer and dearer. Many substitutes are proposed, but for durability, beauty, and comparative cheapness, slate is probably the best thing that can be used. Many causes have conspired heretofore to bring this material into disrepute in some sections. One was, ignorance in those working quarries, of what should be used and what rejected. It was supposed that the scaly material alone could be split to the requisite thickness, and that the solid stone could not be worked; but with more experienced workmen, the scaly stone is now rejected and the solid only used. Of the slate, there are various colors—black, blue, red. &c., found in different localities and occasionally in the same quarry. The writer had the pleasure a short time since, of visiting the quarries at North Hebron, Wash. Co., N.Y. The slate found here, is of a fine red color, and said by good judges to be of a very superior quality. No slate of this color had, until within a year or two, been known to exist in this country, the few specimens seen being imported from Wales or from France. A Welshman, who had been a practical quarryman in his own country, first opened one of the quarries, since when some three or four companies have invested a considerable amount of capital in the business of getting out the slate for roofing, and the tiles for stone floors, known as Mosaic. The quarries are worked mostly by Welchmen, who were familiar with the business before coming to this country. The refuse slate is ground, making a very fine material for painting.

As a matter of economy, the slate must in time come into general use. It is furnished at a price but little above that of the best shingles; it is not, like them, liable to take fire from sparks from chimneys or else where, and will last a long time. We have seen it stated that an old house was torn down lately in Boston—the slate from the roof of which sold for eight dollars a square—after covering the house for more than a hundred years. A square of slate will cover about the same superficial area as a thousand shingle. For suburban cottages, a very pretty roof may be made by using the different colors of slate in alternate squares. The accompanying specimens were brought from the quarry of P. H. Neher & Co. R. Merchant.

The samples sent us, are certainly beautiful, and we should think the use of slate in roofing might often more than repay its extra cost, on account of its longer endurance, and the protection it affords against fires. Eds.

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PLAN OF A KITCHEN GARDEN.

Where all the work is done with the spade, and no ornamental planting is desired, the plan furnished by our corresponeent ("A Pupil of the Cultivator,") is a simple and good one, and no doubt as well adapted to the intended purpose as any we could furnish. In the country, where horse labor is always at command, a great saving is effected by laying out the kitchen garden so as to admit the use of the plow, subsoiler, cultivator, and harrow.

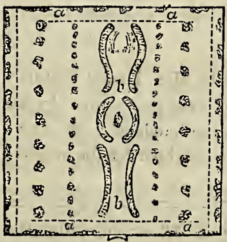

Fig. 1.

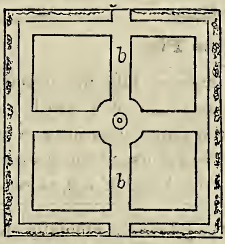

Fig. 2.

In the above figure (Fig 1), we have endeavored to show an arrangement for this purpose, where dwarf fruits trees, currant and gooseberry bushes, &c., are planted in continuous rows across the garden; the crops of vegetables being planted between, and the whole cultivated by a horse, which turus about at the ends on the spaces or alleys, *a*, *a*. The flower garden and ornamental part occupy a strip at the centre, on each side of the alley, *b*, *b*. If desired, this part may be wholly omitted. Fig. 2, shows the more common way of layiug out kitchen gardens into *quarters*, where, it will be observed, horse labor can not be introduced.

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Western Fruit Culture.

The Ohio Pomological Society holds its sixth session at Cleveland, Dec. 5th, and they are making an effort there to bring out a valuable class of facts on Western Fruit Culture. They ask each member to come prepared to submit information to the Society on the following points, viz:

First.—The fruits cultivated by himself, or in his region, with the proper name, and all the local and other synonyms known to him. The character of the top and subsoil in which grown; if the surface is a level plain, or hill side, the aspect and elevation. What varieties best adapted to these soils, and locations, and their productiveness. The mode of cultivation, pruning &c. The effect of manures, kind used, when and how applied.

Second.—The influence of the stock on the health and duration of the varieties grafted, or budded on the same, and the relative merits of the two modes of propagation, if any. Also the relative effect of root grafting (as practised by many nurserymen, and stock grafting, on the health and duration of the tree.

Third.—Observations on insects injurious to fruit, trees, and vines. The diseases or maladies to which they are subject, with the best modes to counteract these evils, with any other information of interest on the subject.

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American Pomological Society.

The third session of this association was opened in Horticultural Hall, Boston, on the 13th Sept., by an address from the President, Hon. M. P. Wilder of Boston, who after heartily welcoming the members to the home of the Pilgrims, took up, and discussed with his usual ability, several important questions in pomological science. The attendance of members was large, nearly every state in the Union being represented. Our limits will permit us this week only to give the list of officers, leaving till another time our usual synopsis of the discussions, and the conclusions in which they resulted. The officers elected are as follows:

President—Hon. MARSHALL P. WILDER.

VICE PRESIDENTS.

Caleb Cope of Pennsylvania,
A. H. Ernst of Ohio,
S. L. Goodale of Maine,
Col. B. Hodge of New-York,
Lawrence Young of Kentucky,
H. F. French of New Hampshire,
Frederick Holbrook of Vermont,
Samuel Walker of Massachusetts,
Stephen H. Smith of Rhode Island,
Dr. A. S. Munson of Connecticut,
Thomas Hancock of New Jersey,
E. Tatnall, Jr. of Delaware,
William C. Wilson of Maryland,
Yardley Peirce of Virginia,
Joshua Peirce of District of Columbia,
Joshua Lindley of North Carolina,
Robert Chisholm of South Carolina,
Richard Peters of Georgia,
C. A. Peabody of Alabama,
B. F. Nourse of Florida,
Thomas Afflick of Mississippi,
Henry E. Lawrence of Louisiana,
Rev. C. H. Byington of Arkansas,
Thomas Allen of Missouri,
James Grant of Iowa,
N. P. Talmadge of Wisconsin,
W. D. Halay of Illinois,
Henry L. Ellsworth of Indiana,
Dr. W. Yandall of Tennessee,
Dr. Henry Gibbons of California,
Edward Hunter of Utah,
James Dougall of Canada West, and
Hugh Allen of Canada East.
Secretary—H. W. S. Cleveland of New-Jersey.
Treasurer—Thomas P. James of Pennsylvania.

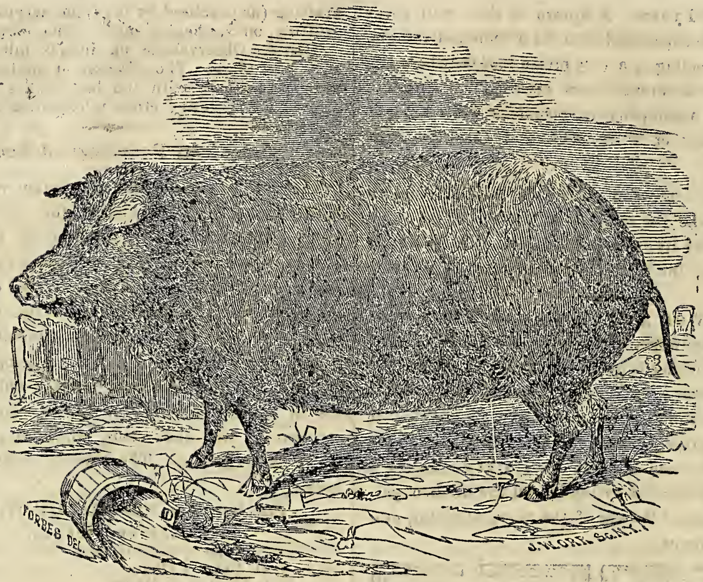
The following standing Committees were appointed:

Executive Committee. The President and Vice-Presidents ex-officio. William D. Brinckle of Pennsylvania, B. V. French of Massachusetts, J. A. Warder of Ohio, Richard Peters of Georgia, Benjamin Hodge of New-York.

On Foreign Fruits. C. M. Hovey of Massachusetts, Charles Downing of New-York, C. B. Lines of Connecticut, S. L. Goodale of Maine, H. E. Hooker of New-York, J. M. Hayes of New-Jersey, E. J. Hull of Illinois.

On Native Fruits. William D. Brinckle of Pennsylvania, P. Barry of New York, Henry Little of Maine, Robert Manning of Massachusetts, Thomas Hancock of New Jersey, J. B. Eaton of New York, B. E. Cutter of New Hampshire.

On Synonyms. J. S. Cabot of Massachusetts, William R. Prince of New York, L. M. Berkman of New Jersey, A. H. Ernst of Ohio, J. J. Thomas of New York, Robert Buist of Pennsylvania, F. R. Elliott of Ohio.


FORBES DEL.
J.W.ORR. SC. N.Y.

The Portugese Pig.

The above engraving represents one of a breed of pigs imported into this country by Hon. Daniel Webster, from Portugal. They arrived at New-York about the time of Mr. W.'s death, and were passed over by his heirs, to E. W. Kimball, Esq., of Long Island. Some of this importation are now in the hands of S. W. Jewett, Esq., of Middlebury, Vt., and A. E. Beach, Esq., of New-York, to whom we are indebted for the engraving. They greatly resemble the Chinese, except in color, these being of a dark red.

Plaster of Paris as a Fixing Agent.

Messrs. Editors—In a previous number of the Co. Gent., (Vol. 3, p. 327—May 25, '54.) I detailed some experiments made upon gypsum (sulphate of lime) and carbonate of ammonia, showing that they will decompose each other when *dry*, and from this inferring that the use of the former as an ingredient of compost heaps, to retain the latter liberated by decay, was founded on truly scientific principles.

During the summer I have extended these investigations, and experiment has demonstrated what was before inferred.

A few ounces of gypsum or sulphate of lime, (dry, but not burned,) was exposed to the fumes and gasses arising from the vault of a privy, for a few weeks, and then carefully examined, when it was found to contain a sensible amount of *sulphate of ammonia* which had arisen from the absorption and decomposition of the carbonate of ammonia, given off from the decaying night-soil. The amount was small, but the conditions of the experiment were such that a large amount could not have been expected. Yet this small amount proved the *theory* correct.

Another experiment, still more decisive, was tried. Some gypsum was spread upon a common plate; this set upon a pile of horse-stable manure, a small box inverted over it to prevent any manure coming in contact with the gypsum, and the whole covered with the manure, which was accumulating from day to day. The pile was continually undergoing decomposition and decay, attended by some heat. At the end of some weeks, the gypsum was taken out, exposed to the air a day or two, and then chemically examined. It was still nearly dry, that is, not wet, and contained a very notable quantity of *sulphate of ammonia* and *carbonate of lime*, proving most decisively that as carbonate of ammonia was generated by the decomposition and decay, it was absorbed and decomposed by the gypsum, and retained in the form of the *sulphate of ammonia*.

It has long been known and recognized that such decomposition took place whenever these materials were in actual contact, and dissolved in water, but many have denied that it would take place when dry, and hence that gypsum was of no use in a compost, or mixed with barn-yard manure, to fix the ammonia, for in such cases it was not dissolved, but merely moistened generally. The experiments published last spring, and especially these now mentioned, prove that it *will retain it*, partially at least. When they are mixed in piles, the conditions for the decomposition are much more favorable than in the experiments made, for then they are in contact, and moistened, and the instant the one is liberated by decay, the other decomposes and retains it.

It is unnecessary here to enumerate in detail the applications, many of which have long been used without any doubts of their efficacy, by those reaping the advantages. It forcibly suggests the use of gypsum with guano, and all highly ammoniacal manures, also with barn-yard manures and composts. It recommends spreading it over and mixing it with piles of stable manure, which are accumulating through the summer, and generally rapidly wasting by heating, nearly as fast as it accumulates.

But I will let your practical readers make such applications as their good sense will dictate. Yours truly, WM. H. BREWER. *Ovid, N. Y., Oct.* 7, 1854.

The Concord Grape.

No horticultural production has excited a greater interest of late years among pomologists, than this new seedling grape. Its hardiness, productiveness, large size, and reputed earliness of ripening,—nearly a month before the Isabella,—have given it very strong claims, at least for a thorough trial.

In consequence of the repeated inquiries which have been made of us as to its quality, we recently made application for a specimen of the fruit, and have been politely furnished by E. W. BULL, its originator, with a box of beautiful bunches, which came in fine condition, notwithstanding a railway ride of several hundreds of miles.

Although the largest bunches had been previously selected for the different horticultural exhibitions, and the drouth of the season had sensibly affected their growth, these were the most showy of any native grape we have met with. The berries measured about three fourths of an inch in diameter, and were almost perfect spheres; the bunches were nearly as large as the one already figured in the horticultural journals, sufficiently compact, and handsomely shouldered,—nearly resembling a well ripened bunch of the Black Hamburgh externally. We have been informed by some of our cautious friends, that they had seen bunches at the exhibitions this season, that were decidedly larger than the figured representation.

The dense *bloom* which covers the berries adds much to the showy appearance of this grape.

Of the quality and flavor, we cannot speak so highly. We consider it as rather inferior to the Isabella, so far as we could judge from specimens conveyed a long distance in a close box. The skin is remarkably thin and tender, and the exterior portion of the berry more juicy and freer of pulp than the Isabella, but the central portion or core holding the seeds, is larger than in the Isabella, Diana, and most other American sorts. The flavor is good, but not of the highest quality. Of the time of ripening, we cannot judge of course, although it is reputed to be much earlier than even the Diana.

As to the real merits of this variety, we are inclined to consider it a valuable acquisition, although we esteem fine flavor when placed against fine appearance, much more highly than many pomologists. As a hardy vine, and an early, large and showy fruit *for market*, we shall not probably find anything to compete at the north with the Concord grape; but those who desire a sweet, delicately flavored variety, for home use, without regard to size, appearance, or productiveness, witl choose the Diana; which is only about one fourth the size of the Concord, in berry and bunch.

A New Pear.

We have received from L. W. PUFFER, of Stoughton, Mass., half a dozen specimens of a new pear, raised by JAMES SHEPARD, Esq., of Dorchester. We are informed that the tree fruited the first time last year, that it is a great bearer, the fruit hanging in clusters of two or three each. The tree, a seedling, is eight years old, and is now about sixteen feet high, with a diameter of four inches, one foot above the ground.

The fruit is not of the highest character, so far as richness is concerned, but its very agreeable melting texture, and fine flavor, render it a desirable table fruit. The tree is described as a free grower, and should it prove a uniform and abundant bearer, this variety would be a valuable acquisition,—though less so, from ripening with so many other fine sorts.

The size is rather above medium, measuring full two and a half inches in diameter each way; form obovate, somewhat ribbed towards the crown; color dull yellow, with a faint greenish cast, and with numerous dots and some irregular patches of russet; stem an inch long, sunk at insertion; calyx erect, in a small, narrow ribbed basin; flesh very melting and somewhat buttery, with a fine, very agreeable, although not rich flavor, as compared with the Doyenné, Belle Lucrative, &c. It should perhaps be named from its originator, the SHEPARD PEAR.

Information Wanted.

APPLICATION OF GUANO.—You will greatly oblige one of your readers, and a young beginner in the art of tilling the ground, by answering a few questions. I have a piece of clayey ground, on which is a three year old clover sod. I will be obliged to plow part of it this fall and through the winter. I also want to put on from 350 lbs. to 400 lbs. of guano to the acre. Now how will I apply it? Is it best to sow 350 lbs. to the acre, and plow it under say twelve inches, with three mules; and in the spring, before harrowing, to give it a top dressing of 50 lbs. to the acre, and then plant as early as possible? I wait for your experience through the columns of your valuable paper, the COUNTRY GENTLEMAN. A YOUNG FARMER. *Maryland.*

The best mode of applying guano, is a question about which there is much inquiry at the present time, and on which we should be glad to receive the views of those who have had experience in the matter. We should not advise our "Young Farmer" to turn his guano under a sod twelve inches deep. But whether, for a spring crop, it would be best to sow the guano, and harrow it in immediately after the land is plowed in the fall or winter, or to delay the application until preparing the land for the crop in the spring, is a question which can only be decided by experiment.

The State Fair at New-York.

The experiment of holding at New-York City, a gathering in which Farmers are almost the only ones especially interested, has now been tried. The weather was against its success. For nearly two whole days, and those, Tuesday and Wednesday, on which depended entirely a punctual arrangement of articles and a brilliant opening of the exhibition, the rain was almost constantly falling. If at any time there was a clearing up among the clouds, it was only to be followed, like that of the housekeeper in the story, by greater disorder than before. The experiment was not therefore made under favorable circumstances; and yet, we doubt very much whether, even under the most favorable, the result would have been materially different. New-York is neither given to patronizing shows of solid merit, which are too dry for its taste. nor are farmers generally willing to run the risk of a visit there themselves.

And still, up to the time of opening, never was promise fairer of success. The hearty co-operation of the American Institute, and the New-York Horticultural Society, which had been promised, was depended upon, to some extent at least, to insure a general turn-out. The co-operation of the first, we heard rather a satirical bystander remark, consisted in taking in members down town at $1 each, and admitting them to the Fair, under the general agreement that Institute members should have free tickets—that of the latter, in nearly the words of another gentleman whose temper may have been tried by the dampness, in bringing about the exhibition of rather less vegetables than could be accommodated in a peck measure.

Nevertheless the show was well worthy in many particulars, of the fullest attendance. The officers of the Society deserve great credit for the arrangement of the grounds, and several of the exhibitors of stock, for the expense and trouble to which they went in contributing so largely to the attractions of the fair. Indeed we think the department of cattle was even better than any previous year, while that of Horses embraced some very good animals, as well as not only the largest, but decidedly the best collection of mules we have ever seen. Sheep and Swine were superior in quality and good in numbers. The Poultry sheds were not as crowded as perhaps they have sometimes been, but they included stock of very general excellence. Fruits and Flowers were about an average display—the mechanical department was quite fully represented, the domestic rather thinly, and the plowing match was, we understood, a spirited and well contested trial.

Before we go on to speak more particularly of the exhibitors and exhibited, it is proper to mention the peculiar merits in the arrangement of the grounds. Everything was embraced in about twenty acres, without being too much crowded for comfort or effect. The covered pens and stalls, well enclosed, but convenient for the examination of their contents, proved absolute necessities amid the storm, as they would have been essential comforts in the sun. The shed for Poultry was well adapted for its purpose. A staging to overlook the track for horses, though very far inferior in size and appearance to that we saw at the recent Vermont Fair, would have been a great addition to the conveniences of the grounds, if people had not been so displeased because a little too much was charged for a seat, that they would not generally embrace its offered opportunities. The buildings were hardly as well put up as has sometimes been the case, but seemed to answer every purpose. The tents were well adapted in size, location and interior accommodations to their several purposes; and the arrangements for supplying their dinners to such gentlemen as were precluded by the Society's business, from going elsewhere for them, were, both in arrangement, and in the amplitude and character of their supplies and attendants, considerably ahead of former years. Carriages were not admitted on the grounds,—a great improvement so far as the comfort of exhibitors and pedestrians was concerned, though perhaps somewhat decreasing the receipts of the Treasurer from city people who had teams of their own.

The Stock Departments comprised some of the finest animals ever exhibited in this country. As there was a considerable number of exhibitors, who had more or less of all the different kinds, and whose enterprize in importing, and care in breeding the purest and most serviceable sorts, have given them an established reputation, as well as been of no small service to our farmers generally, we have thought it better to mention the more meritorious entries of each of these in the different classes, cattle, sheep, swine, &c., by themselves. We shall thus present more concisely and in a more convenient form for comparison, the relative turn outs of the chief exhibitors, and avoid the constant repetition of their names in the different departments. In doing so we cannot hope to have escaped omissions, and can only assure our readers of an *intent* to avoid anything like invidiousness. Not only is it almost impossible, where there are so many noticeable animals, to escape some little confusion in one's notes, but the difficulty of ascertaining the ownership of some, and the want of opportunity for examining all as thoroughly as we could have wished, has thrown many obstacles to entire correctness, in our way. The fewer important errors our exhibiting friends find at our door, the better we shall be pleased.

Lewis G. Morris, Esq., Expresident of the Society, was one of the very largest in contributing to the fine show of last week. His importations, which are yet going on all the time, have comprised and are now including some of the highest bred and highest priced animals England has ever allowed to cross the water. And it is not improper to remark here, that the English breeders are now finding among the enterprizing farmers and associations in this country the very best markets for their animals. Should the best animals which the breeders of New-York, Ohio, Kentucky, and other states in the vicinity of each, could exhibit, be present, as we trust they may, at the National Show at Springfield, (Ohio.) a fortnight hence, we very much doubt whether England herself could conveniently raise in all respects a superior show. This is not said in a spirit of bravado. Every thinking agriculturist who has watched our importations during the last ten or fifteen years will acknowledge its correctness. In fact many of our rich men have gone into the purchasing of stock at the best foreign markets, with the same no-matter-for-the-price spirit which marks others of their number in other ways. Mr. Morris has not suffered this spirit to excite him beyond a proper regard for substantial merits, as well as superlative prices, and those additions which he and others of like character, have made to our country's grazing interests deserve warm commendation.

The *Cattle* shown by Mr. M. consist of Short Horns and Devons. The former were about 16 in number, eight of which were imported animals, and of these last five, partly owned by N. J. Becar, Esq. who has long been associated with Mr. M. in making importations, Balco and Romeo, the first bred by Thos. Bates and calved in Feb. 1849, and the latter bred by the Marquis of Exeter and calved in April 1850, were very superior Short Horn Bulls, and attracted perhaps more attention than any other animals present. Their symmetry of form and neatness of limb was such as we have sometimes seen in portraits of prize animals, but have always heard sneered at by those who "knew any thing about cattle" as impossible to exist. The rest of the Short Horn stock was also very fine. Among these were two imported heifers, just received by the last trip of the *Hermann* Steamer. They were hardly recovered from the voyage, but were yet beautiful animals. As Extra Stock, Mr. M. exhibited a fine cow of his own breeding, got by "Lord Eryholme."

Mr. M.'s *Devons* were 14 in number. The 3 year old Bull "Frank Quartly," has sired much of his young stock, among which were shown several fine Bull calves, and well deserved the first prize which was awarded to him. The first prize imported Devon Cow, Birthday, was also the property of Mr. M. Fuchsia, a cow of his own breeding, was a superior animal and also carried off a prize in its class.

Mr. Morris' *South Down Sheep* were decidedly beauties. He entered a full assortment to compete for the premiums offered. The gem of the collection was "Young York," a buck 3 years old, bred by Jonas Webb, and imported last year by Messrs. M. & Becar. His cost was *eighty guineas*, and his appearance justifies his price.

The *Essex*, *Berkshire* and *Suffolk* breeds of Swine were all represented in the pens of Mr. Morris. They were all marked by the purest blood of their different breeds, and attracted particular attention, even among other fine stock. They numbered, pigs and all, upwards of fifty head. "Master Berk" was an unusually excellent Boar of the second named breed.

Noel J. Becar, Esq., whose name we have already mentioned as an associate with Mr. Morris in the importation and ownership of several animals shown, exhibited some superior *Short Horns* of his own raising, which we should not fail to notice. Among them were a pair of 2 year old heifers which bore off the first and second prizes in their class, and whose beauty received general commendation. All his stock, like that of Mr. Morris, is of the most unquestionable purity and merit, as well as bred with the greatest attention to the most desirable points.

Messrs. Hungerford & Brodie, from Jefferson Co., were among the largest exhibitors of imported stock. Their *cattle* embraced a fine lot of both Ayrshires and Short Horns. Among the former we particularly noticed a couple of very superior imported yearling Heifers, which took the first prize at the Scotch Ayrshire Show, last spring. They give promise of being most profitable additions to the herds of their enterprising owners. They exhibited also a very superior Bull, imported by them two years ago. He was an admirable specimen of the breed. A pair of calves of their own raising were very good,—also a two year old heifer. Their herd of pure Ayrshires numbers 23.

Among the Short Horns, exhibited by these gentlemen, were the following, which attracted general attention: St. Nicholas, a Bull recently imported,—calved in Feb. 1853, and got by Bellville, and a yearling Heifer of the same get. Both were very superior.

Among their *Swine*, was a pair of recently imported *Yorkshires*, as well as some excellent Suffolks. The Yorkshire Boar was a very fine animal, and the Sow well deserved the first prize she received, for breeding purposes. They also exhibited 6 pens of Leicester *Sheep*, including a very large and superior buck 3 years old,—a very recently imported yearling buck, and two fine pens of imported Ewes, respectively above and under two years old. It was especially remarked of the stock of Messrs. H. & B. that they were in the best condition possible, while many other animals on the grounds showed palpable effects of the recent severe drouth. They displayed the utmost care in their feeding, and attention to their cleanliness.

Wm. Kelley, Esq., President of the Society, exhibited an excellent lot of Short Horn Cattle. "Prince Albert," who took the 2nd prize in his class, was well worthy of the honor. Two of his cows also received, both from the public and the report of the committee, "especial commendation."

L. Spencer, Esq., Westchester, included in his show, the imported Bull "Augustus," calved Feb'y 1851—Esterville 3rd, which took the first prize at the State Show in 1850, and that at the Am. Institute in 1853—Phoebe 7th, got by the Duke of Exeter, and Peony 3rd, a yearling heifer got by Augustus. They were all worthy of particular notice, and Phœbe 7th carried off the first prize. The committee also "especially desire to commend" "Esterville 3rd," which "is a cow of very great excellence."

The show of E. P. Prentice, Esq., of this city, was such as might have been expected from his reputation as an *Ayrshire* breeder. His two year old Bull obtained universal encomiums as well as the first prize, and a heifer calf and 3 year old Cow, which was also successful on the prize list, shared with him the praises of cattle men. Mr. P.'s herd has always been noted for its excellence.

Edward G. Faile, Esq., West Farms, had a goodly number of *Devons* on the grounds. Among them we particularly noticed several heifers of extraordinary merit, and a bull calf, "Tecumseh," of no little beauty and promise. Moreover, Mr. F. had an assortment of the feathered kind. His imported speckled Dorkings were among the very best of the breed, which by the way, we altogether prefer to the *White*. He had also beautiful Black Spanish and Bolton Greys.

W. P. and C. S. Wainwright, of Rhinebeck, were also large exhibitors of the Devon breed. Among their animals were "May Boy," an imported 4 year old Bull, and 2 imported yearling Bulls. Also a very superior cow three years old, imported from the herd of Mr. Baker, of South Johnstown, by whom she was bred, and which had taken the 2nd prize as a yearling, at the Show of the Royal English Society,—and a very fine cow of their own raising. These gentlemen exhibited, we believe, about 14 head, and were successful in taking a proportionate number of prizes. We also find 2 fine Boars and a lot of excellent 5 months old Pigs, put down to their credit in our account with the *Essex* Breed, and on these, they are entitled by the report of the Committee to certainly a couple of prizes on the list, and one discretionary besides.

Without J. M. Sherwood's contributions the Exhibition, however large, would not have seemed complete. They were this year small but choice,—including "Lafayette," calved June 1852, "Princess 7th," calved Oct. 1853, and Red Jacket calved a month later. He also showed a Suffolk sow and pigs, which received a discretionary premium, from the Committee. We may also mention in connection with the stock of Mr S., the Bull, "Wolviston," shown by Mr. Ambrose Stevens.

D. B. Haight, Duchess Co. was a large exhibitor of *Sheep*, though he had also on the grounds a fine 2 year old Short Horn heifer from the herd of Jas. Lennox, Esq. and a good pair of *Swine*, of each the Berkshire and Suffolk varieties. His flocks of Sheep at home, consist of about 50 pure South Downs, and nearly half as many Cotswolds. Of these he exhibited a number of pens,—and obtained on them several prizes. Mr. H.'s animals were well worthy a special visit.

S. T. Tabor, of Duchess Co., exhibited a fine Short Horn yearling bull "Opal,"—the first prize yearling heifer, and a pair of very superior two year old heifers.

We desire to mention in addition to the above named exhibitors, Wm. Watson, Westchester, who had fine *Ayrshire* Cattle, both imported and of his own raising, among which was the first prize Bull Calf; Jas. Bathgate, Fordham, Robt. R. Morris, Westchester, and John Brown, Auburn, who showed very fine Grades, and received between them many of the premiums offered to that class—Mr. Brown showing also some superior Ayrshires; Alvin Slate, Jr., Westchester Co., for 5 head of fine Short Horns, among which "White Star," a yearling bull, and an aged cow, were worthy of commendation; G. H. Seward, Tarrytown, for an Alderney Bull; and G. W. Coffin, Duchess

Co., for a very fine pair of yearling Ayrshires, a Bull and Heifer, both of which received first prizes.

We find by the Premium list that the first prize Short Horn Bull was adjudged to be "Prince Royal," owned by Thos. Gould, Aurora. We were unfortunate in neither seeing Mr. G. nor his stock on the grounds, which we regret the more, as he included so meritorious an animal among their number, and, in addition, a prize Devon Bull, "Holkham."

Among other *Cattle* exhibitors we have the names of Jas. Merriam, Oriskany; Thos. Richardson, West Farms; John Oliver, Sterling,—who received the first prize for the Devon Bull, "Rover," but which we did not see; W. D. Steward, Chatham 4 Corners: Enoch Ottley, Phelps; Patrick Weir, New York; A. F. Van Cortlandt, Westchester; O. Howland, Owasco; S. A. Curtis, Canaan, Mr. Ostrander, Dutchess Co., G. and J. A. Smith, Montgomery.

H. G. Sheldon, Sennett, exhibited 10 yoke of *Working Oxen*, and among others who competed in this department, were Elon Sheldon, Sennett, M. Salisbury, Jefferson Co., and A. M. Clark, Cayuga Co.

Foreign Cattle were chiefly shown by B. and C. S. Haines, Elizabethtown, N. J., who had a fine collection of Short Horns; R. S. Colt of Patterson, N. J., who exhibited Alderneys, and J. T. Norton, Farmington, Ct., whose stock of home bred and imported Alderney cattle, were well represented by a fine 20 months old bull, an imported cow whose average of butter was said to be 12 lbs. weekly, another good cow and a pair of promising calves.

Among exhibitors of *Sheep* more particularly, whose names have not before been mentioned, Isaac N. Deforest of Dutchess Co., was one of the largest. His stock consisted of French Merinos, and he exhibited beside, in the cattle line, the 1st premium 2 year old Devon Bull, "Winchester," and a fine yoke of 3 year old Devon Steers. Wm. Chamberlain, Red Hook, had both French and Silesian Merinos,—and in addition a prize Hereford Bull and Cow. Isaac Merritt, Hart's Village, exhibited Saxons of fine quality, of which he has a flock of about 150, and a very good grade Devon Cow. S. A. Curtis, Canaan, had some fine long-wooled Sheep, as well as a few beautiful Ayrshires. R. Burrett, Burdett, was among the exhibitors of Merinos,—J. S. Hallock, Milton, among those of Cotswolds, and Oscar Gregg, Blooming Grove, of middle-wooled. The chief show of fat Sheep was made by E. Gazley of Clinton, Dutchess Co. Joseph Haswell of Hoosick, showed fine cross breeds and Merinos.

We must not pass by the Berkshire *Swine* of E. Wait, Montgomery, the Essexes of S. Griswold, Spencertown; or the Essexes and Suffolks of Wm. Ainslee, New-York.

Of *Foreign Sheep*, we noticed chiefly the Long-wooled of Ralph Wade, Coburg, C. W., the Silesian Merinos of Geo. Campbell, Westminster West, Vt., and a Leicester Buck just arrived per steamer Hermann, and shown by R. A. Alexander, of Kentucky. Henry S. Freeman of Lonsdale, R. I., exhibited fine Suffolk *Swine*.

Horses.—We did not name, in cataloguing the stock of Mr. L. G. Morris, his premium Horses; for in truth we were so hurried as to have scarcely seen them. There were the celebrated imported thorough bred Stallion "Monarch,"—and the brood Mare, "Fashion," with foal, both of which received first prizes. Isaac E. Haviland showed a beautiful pair of 16 hands high matched Horses, color light bay. John Butterfield, Utica; Clark and Jarolemon, Oneida Co., E. S. Dewey, New York; R. R. Morris, Westchester; and Reuben Murray, Canandaigua, were among the other principal exhibitors of matched Horses. Philip Helms, of Harlem, showed a Black Hawk of fine appearance and said to be, like most of that breed, very gentle,—Wm. Bathgate, Motthaven, an eight year old Black Hawk mare, worthy of notice, and Dr. P. Crispell, Jr. of Ulster Co., a fine 3 year old Stallion. L. B. Brown, West Farms, exhibited a pair of horses whose united age was 39 years, which, considering this circumstance made remarkable time—also a Messenger Gray, 6 years old, which appeared to be a serviceable animal. Mrs. Wilbur of New York city rode a fine little Saddle Horse, whose action, the grace of his rider, and the beauty and spirit of both received universal plaudits.

We have already stated the fact of there having been a collection of Mules hitherto unequalled in this part of the country both in numbers and quality. J. L. Jackson, New-York city exhibited a very large number, including several pairs of extra weight. D. McCauley, of the same place had also a fine show, including one or two very superior teams, and Wm. Dykes, Newtown, L. I., 4 pairs of fine animals. J. Buckalew, Jamesburgh, N. J. had a team of 12, which were excellently trained and were driven as nearly as we could judge, with no greater difficulty than that of managing an equal number of horses. His whole collection included 13 pairs,—all bred in Kentucky, well trained and fine animals. E. B. Bishop & Sons of Jersey city and New Haven, Ct., had also a beautiful exhibition of them, samples of which our Connecticut subscribers will probably have an opportunity of examining at the State Fair this week. They well deserve minute attention, and would we doubt not, be found an invaluable addition to our farm Stock. Our energetic, economical farmers should take this subject into consideration.

The collection of Poultry was, as we have said, rather marked by excellence than extent. H. S. Ballou, of Blackstone Mass.; R. Burrett, Burdett; H. S. Freeman, Lonsdale, R. I.; J. C. Hall, New-York; Geo. Anderson of this city; H. Johnson, Patterson; G. W. Cummings, Rochester; and W. E. Haxton, Beekman, were among the exhibitors of Black, Buff, Grey, and Spangled Shanghais, under various names,—Mr. Freeman showing in addition some beautiful Seabright Bantams, and Mr. Johnson very pretty and diminutive African ditto, besides excellent imported specimens of the English Game Fowl. There were Turkeys shown by Cummings of Rochester and Howland of Owasco,—and several coops of Ducks, Geese, &c., whose owners we did not learn. Among the comparative novelties were a splendid assortment of Fancy Pigeons from T. M. Rodman of West Farms; and a *white* China Goose, just imported, shown by O. R. Ingersoll of Brooklyn—a beautiful bird, which had unfortunately lost its mate on the passage. We saw a pair of *white Indian* chickens, as they were labelled, which were, however, very black. S. V. C. Van Rensselaer of Claverack had some beautiful Speckled Dorkings, Spangled Shanghais, and very fine Lop-eared Rabbits. These last were not shown for competition, as Mr. V. was one of the judges—consequently the premium was taken by Mr. Faile, whose collection was, indeed, scarcely inferior to the other.

We find we have not yet spoken of the Flowers and Fruits, the Implements, the Domestic and other manufactures, or of the Dairy and Produce. We must therefore be as brief as possible. Suffice it to say of the last, that the show was rather small; the competition, however, being considerable for some of the prizes offered. Jesse Williams, of Rome had on exhibition two Cheeses of 500 lbs. each, and we were told, milks some 200 cows at his home dairy. Wm. P. Ottley, of Ontario Co., showed very fine samples of different sorts of Grain, very neatly put up.

The Floral tent was well adapted and fitted up for its purposes, and presented a beautiful appearance. Among the Fruits, we noticed the immense numbers which Elwanger & Barry, of Rochester, always send of Pears,—being upwards of 200 varieties, and beautiful and lip-provoking they were too. Hovey & Co., of Boston, were not far behind in numbers, they having 190 varieties of Pears and all as tempting to the eye as pear could be. Messrs. H. & Co. favored us with a list of their newer sorts, for which we would be glad, if we could, to make room. They also showed fine specimens of the Concord Grape. E. Dorr, of this city, was, as he is wont to be, on hand with all sorts of plums, or at least 34 of them, including several new and beautiful varieties. J. W. Bailey, Plattsburgh, exhibited a beautiful show of apples, 71 sorts. Among the exhibitors of native grapes were Dr. Underhill of Croton Point, whose show was as usual, very fine, and Th. Fowler of Fishkill, who exhibited a good assortment of Isabellas, Catawbas and Dianas. The Hot House clusters shown by T. W. Ludlow of Yonkers, and those of James Porter, Esq., Princeton, N. J. were magnificent.

Among the FLOWERS were very good collections of Dahlias, Verbenas, &c. &c., beautiful bouquets and devices, all of which we must pass by. We can only say that the Society were largely indebted, as our Horticultural Society always was, to Mrs. J. T. Van Namee and William Newcomb of Pittstown, who exhibited fine assortments of different flowers and several beautiful designs. There was also worthy of particular notice, a model landscape made with mosses for the turf, little plants for the trees, &c. &c., and shown by Graeff a florist of Brooklyn. Also a beautiful case of preserved birds, insects, &c., shown by John G. Bell, Taxidermist, New-York.

Mrs. Van Namee was also a large exhibitor of Domestic Manufactures, and carried off there, as well as among the flowers, several well deserved prizes. The show of Domestic Goods was generally good, though not extensive.

Mechanical Inventions, Agricultural Implements, &c., were exhibited in considerable numbers. Of the latter, R. L. Allen. Mayher & Co., and Longett & Griffing, were the chief contributors. We hope to present our readers in future numbers, cuts and descriptions of several novelties in which they have an interest, and so for the present must pass them by.

In closing, we may be allowed again to commend the exhibition, as one in many respects worthy of New-York and the officers of the society—at least as regards the grounds themselves, and what is of more especial interest to the farmer perhaps than any thing else, the stock there exhibited. The lack of such attendance as gladdened the hearts of our Philadelphia friends the other day, or as has before been present at our State Shows, should not be discouraging to the Agriculturists of New-York. The Show had much against it. The weather of the first two days was enough to do away with all enthusiasm. The western part of the State felt that it had some claim to the fair this year, and did not turn out with the warmth and the will it has usually felt. County shows have, so far as we know, been generally good this year, and this has engrossed the attention of many who generally exhibit at the State Fair. Upon the whole, we congratulate the friends of the society that, with all the obstacles in its way which we have shown, and more which we have not room to tell, it has done so well this year. And our readers will pardon us for the length of the account we have given,—if in fact it be too long to interest them. There was much to speak of, as certain tired limbs that peregrinated the grounds day after day, might testify; and we trust that any tediousness on our part may not prevent general attention to the details of an Exhibition which partakes of the character of the State it represents, in being to some extent an exemplar to other members of our own confederacy, and to foreign nations the exponent of our progress in Rural Improvement.

IMPORTANCE OF DRAINING.—By a recent decree of the French government, 100,000 francs, about $20,000, are devoted to encourage the manufacture of draining tiles for agricultural purposes in the provinces

Treatment, Value and Application of Manures.

Translated from the German of Prof. Wolff for the Co. Gent.

BY S. W. JOHNSON.

"FIXING AGENTS IN CONNECTION WITH LIQUID MANURE.—While I consider the addition of certain chemical fixing agents to the mass of yard manure as unnecessary, still their use in connection with the drainings—the liquid yard manure—is to be highly recommended; for in this case the whole of the added substance can be directly applied to the definite object of retaining vapors of ammonia, and therefore the process is not an expensive one; since a relatively small amount of fixing material is sufficient to prevent the escape of ammonia from a large quantity of the liquid, and also to fix the ammonia of the solid manure, so soon as the latter is drenched with the former. The mixture must of course be made in the reservoir which collects the drainings, and which may occupy a separate easily accessible position, or may be placed in the midst of, and covered by, the manure. Especially in the latter case, care must be taken that the fixing agent employed be such as does not occasion the separation of large quantities of solid matter, which might easily stop up the pumps. In practice three substances are especially employed as fixing materials, viz., gypsum (or plaster of Paris,) green-vitriol, and sulphuric acid. The two former cause the separation in the tanks of a more or less considerable sediment which in case of gypsum consists mostly of carbonate of lime, or when green-vitriol is employed, of a mixture of oxyd of iron and sulphuret of iron. The lime sediment, together with the liquid, which contains all the ammonia, dissolved in the form of sulphate of ammonia, may be applied directly to crops, and especially to meadows, with the greatest advantage. The iron sediment formed when green vitriol is used, is also a good fertilizer; but may at first act injuriously from containing the sulphuret of iron, which by exposure to the air, becomes again poisonous green vitriol, (protosulphate of iron,) that is destructive to young plants. By long and thorough exposure to the air, however, another body (persulphate of iron) is formed, which is innoxious. Green vitriol has long been used as a fixing agent in Switzerland, and in some parts of Belgium, while in England sulphuric acid is preferred, and the latter must always be employed where the separation of sediment is to be avoided.

A well known English farmer who has made many experiments upon the use of sulphuric acid, obtained the best results when he added 1 lb. sulphuric acid to 150 lbs. of tank liquid, (1 lb. to 20 gallons, nearly.) He also found in comparing the effects of two equal quantities of tank liquid, one treated with sul. acid, and the other applied in its usual state, that in case of the former an expenditure of $10 gave a hay increase of $65 value. A similar if not so great advantage may of course be expected in case of all crops to which liquid manure is applied.

The extent to which ammonia may be lost when common liquid manure (i. e. liquid which has not been mixed with a fixing agent) is spread out upon a large surface, as when it is applied from the watering cart to a growing crop, thereby evaporating with great rapidity, is made evident by an experiment of D. Krutzsek who found that the solid residue remaining after the evaporation of perfectly putrid yard liquid, contained 3⅓ pr. ct. ammonia; while the same liquid, treated with an acid (fixer) before evaporation, gave a residue containing 12⅓ pr. ct. of ammonia. According to the estimates above given, the liquid manure yielded by each cow during a year, requires about 23 lbs. of sulphuric acid to fix its ammonia—if it be assumed, by way of example, that ⅔ of the urine is absorbed by the straw or litter and thus becomes a part of the solid manure, while the other ⅓ finds its way to the tank. To a pailful of tank liquor, may be reckoned ⅓—½ lb. of sul. acid, and when the solid contents of the cistern are known, it is easy to calculate the total amount of acid required to be added from time to time, every week, for example. In case the whole of the contents of the tank are applied to maintain the solid manure in a proper state of moisture, or to the preparation of compost, thus not being brought into direct contact with the crops, it is advisable to add yearly to the tank about 20 - 25 lbs. of acid for each head of cattle. The outlay cannot fail to be well repaid, though it must be confessed that the advantages in the last case are not so remarkable, as when the liquid manure is applied, as such, directly to the crops; and this not because the action of the acid is not as perfect in one case as in the other, but for the reason, that when yard manure and composts are skilfully prepared, the loss of ammonia is very slight, even without the use of fixing agents. I therefore recommend before making any great outlay for fixing materials to be used in the improvement of *solid yard manure* or *compost*, to determine by accurate experiment on the small scale, what is the money profit resulting from their application, and thus ascertain if their use will pay; but when the *yard drainings* are to be directly applied to crops, one can trust that the use of sulphuric acid in the proportions mentioned will yield an ample profit, will in fact, under favorable circumstances as to weather, &c., repay the outlay three to six-fold. It should be added that muriatic acid (spirit of salt, hydrochloric acid) may be used with the same results as sulphuric acid whenever it is cheaply obtainable.

TREATMENT OF HORSE-DUNG.—The use of fixing agents has proved to be especially advantageous with such manures as are very rich in compounds of nitrogen. Of such character is the urine of the horse, and when horse dung, itself so heating, is to be moistened and brought to a proper stage of decay, by drenching it with the liquids that have drained from it, the employment of chemical means for retaining ammonia is most necessary.

In places where large quantities of horse-dung accumulate, which must often lie several months, exposed perhaps to the summer heats, before it can be brought into use—the method proposed and carried into practice by Schattenmann, will be found very useful, if it is desired to preserve the qualities of the manure a long time unimpaired. Such a preservation can only be effected by artificially retarding the fermentation, which in case of horse-dung, may go on, as is well known, with such energy and rapidity as to cause even a spontaneous combustion of the mass. Schattenmann seeks to hinder the fermentation not only by letting all the liquids of the manure run into a capacious cistern, but he drenches the fresh dung, especially in hot weather, with considerable quantities of water, and collects the washings in the same cistern with the first drainings. By this procedure the dung is, on the one hand, saturated with moisture; and on the other hand, fermentable substances are dissolved out and removed, thus in a double manner hindering the too rapid progress of the decay that soon supersedes.

This treatment is improved upon by adding green vitriol, or where this is costly, dilute sulphuric acid or even plaster of paris to the collected liquids, in quantity sufficient to fix their ammonia, which may then be used to drench repeatedly the solid portions, as has been before written of, in connection with the management of common yard-manure.

The urine of the horse evolves during its putrefaction considerable quantities of sulphuretted hydrogen; to prevent its unpleasant odor it is well to use a few pounds of green vitriol in all cases, even when gypsum or sulphuric acid is depended upon as the chief fixing agent.

Finally the manure of sheep may be treated as has been recommended for horse manure, especially when it accumulates in the yard during summer in considerable quantity, and does not remain in the stable under the animals.

PEAT COAL AS A FIXING AGENT.*—Experiments have been made in Saxony with peat-coal which fully demonstrate its value as a means of retaining the virtues of liquid manure. By its use not only is the volatile ammonia held back, as when gypsum, sul. acid, &c., are employed, but it is carried into a less soluble combination whereby its leaching into the subsoil is hindered. Doubtless on many light soils, no inconsiderable share of the ammonia contained in liquid manure which has been treated with the other mentioned fixing agents, is lost by the action of rains. Beside this advantage, the coal has, as is well known, the faculty of absorbing any vapors of ammonia that may be floating in the air, or that are brought down in rains and dews.

Finally the porous coal acts upon many soluble mineral salts, especially upon those containing potash in an analogous manner, though not in so high a degree. It renders them less soluble, and therefore more durable in their action, as they remain a longer time in the vicinity of the roots of plants.

These properties are possessed in the highest degree by the exceedingly porous wood-charcoal: this is however too dear in Germany, to be used on the large scale.

Peat or turf coal acts more favorably as a fixer, according as the original peat or turf from which it is prepared, is more of a light and woody nature and less mingled with sand and earth."

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* On this topic the author goes into details, to translate which would make this article too long. I give you, therefore, the substance of the statements in condensed form.
S. W. J.

The Poultry Yard.

THE SHANGHAIS.

Messrs. Editors—As you request communications from Poultry Fanciers on matters connected with the raising of fowls, as I am writing, I take the liberty to intrude upon your notice a bit of my experience in that line. I have raised this season between one and two hundred chickens of the buff and white Shanghai varieties. All things considered, I think the Shanghais are *one* of the best (if not *the* best) breeds of fowls we have. There is a great deal of difference in the stock of this breed. Some are coarse, loose jointed, crane-like concerns, with legs long enough to *step* over a pretty high fence; these are a disgrace to the race Many persons who have had fowls of this description, have, after a short trial, discarded them, and think (and justly) that there is a great deal of "gammon" in the "hue and cry" about fancy poultry. Those who are procuring Shanghai fowls to breed from, should be sure to choose those that are *short-legged* and *plump* in the make, from stock that *breeds uniform* in size, shape and plumage.

The Shanghais are quiet and peaceable, good layers, and careful sitters, and what is very important, the chicks are hardy, easy to raise, and less liable to be affected by disease than those of many other breeds—particularly the Poland and Black Spanish. It is a perfect vexation to try to raise chicks of the last named breed, for they are continually drooping and dying. With the exception of what have been destroyed by rats, and other vermin, I have hardly lost a chick this season, out of the broods which were properly cared for.

I think that the *pure White Shanghais* are preferable to the *Buff*, for the reason that they are less inclined to be coarse and long-legged. Certainly, as far as beauty is concerned, they take the lead, their large red combs contrasting finely with their snow-white plumage. Martin Burrell. *Oberlin, O.*

GAPES IN CHICKENS.

Messrs. Editors—It is my aim never to publish anything which I have not thoroughly proved to be both true and useful; but as there has been so much guess work and humbug published upon the disease in chickens called the gapes, I will publish, if you think proper, my experience in that disease. I have lost over one hundred and fifty chickens with the gapes, in the course of the summer, and have dissected many—examined them thoroughly, and found nothing to justify the conclusion that the disease is caused by worms in the wind-pipe, throat or crop, as some writers pretend, nor have I found any remedy to cure or prevent the disease, in all that I have read. On the contrary I tried all the remedies published in the Cultivator, and many more, without any good effect. I do not believe that there ever was a cure performed by any remedy I have tried. But I have observed that they were not affected with the disease in the spring when the weather was cool, nor in the fall, but only in hot weather—that the most of them took the disease in the morning, after being brooded all night. I therefore concluded it was caused by too much brooding in warm weather. I procured a headless barrel which I set upon a grass plat—took the chicks from the hen at a fortnight old; put them in and fed them, since which I have lost no more with the gapes. You are welcome to my experience. Let others try it. Chas. Babcock. *Guilford, Vt., Aug. 24th* 1854.

SETTING HENS.

In setting hens, thirteen eggs are enough to give them; a large hen might cover more, but a few stronger, well-hatched chicks are better than a large brood of weaklings, that have been delayed in the shell perhaps twelve hours over the time, from insufficient warmth. At the end of a week, it is usual, with setting turkeys, to add two or three fowls' eggs, "to teach the young turkeys to pick." The plan is not a bad one; the activity of the chickens does stir up some emulation in their larger brethren. The eggs take but little room in the nest, and will produce two or three very fine fowls. D. Kirtland. *Albany.*

CURE FOR WASP-STINGS.

In picking a peach from the tree, the writer was so severely stung in the finger by a yellow wasp (called, by untaught boys, "yaller jacket,") as to cause the effusion of blood, to produce pain even up to the shoulder. Saleratus, made into a *paste* with water, was soon applied as a poultice, and in half an hour had so completely neutralized the acid poison, that the swelling had entirely gone down, and nothing remained but the soreness occasioned by the puncture. This application has proved better than liquid ammonia, so far as a limited trial has proved, and is probably the best remedy for stings generally. It is important that the nearest alcaline substance at hand should be applied till a better can be found, whether it be ammonia, or even a paste of fresh ashes. In the absence of any of these, a mud poultice is an excellent application.

A VALUABLE LINIMENT.

Messrs. Editors—I send you a recipe, which I cut from a newspaper a year or more since, for a liniment that I have found valuable in my own case, for rheumatism of 14 years' standing in my right arm and shoulder, and also for lame horses. Take

1 quart alcohol,
½ gill beef's gall,
1 oz. oil oreganum,
1 oz. camphor gum.

These should all be mixed and well shaken together. Any druggist can make the above quantity for about 60 cents. It may be applied by the hand, or with a rag or sponge, and should be well rubbed in. Care should be taken that the parts on which it is applied, do not get wet while using this liniment. C. G.

A box 26 inches by 15-2 inches square, and 8 inches deep, will contain one bushel.

Sundry Hints for the Season.

There is at least one very good reason why the work of the last of the autumn months should be promptly attended to. If not seasonably performed, everything will be transfixed with chains and bolts of frost, and, to most of our readers, four months must elapse before emancipation can take place. In any other month, what happens to be neglected, may be done in the first few days of the next; but here, no allowance is usually given the tardy and neglectful farmer. For this reason, it may be of essential use to point out some of the closing fall-jobs.

One of the first, is to secure unharvested crops of carrots and ruta bagas. They may sometimes escape longer, but they are never positively safe beyond the first of the month. Ruta bagas being much exposed above ground, should be gathered at once. If covered in heaps by earth, they will endure a slight freezing without injury, and hence may not need so thick a covering as potatoes and beets; but in the cellar, exposed to the air, no frost hard enough to touch them should be admitted. If air can be easily let in for ventilation below them, and ready egress is allowed for it above, they may be piled in large masses; but without this precaution they will probably heat, rot, and spoil. In out-door heaps, ventilators in the top made by thrusting in a small bundle of brush, or even of coarse straw, are indispensable. These remarks will apply in some degree to all other roots. Heaps of potatoes are often found to contain most rotten ones at the top, which is ascribed to the supposed action of frost to this most exposed part,—when the true reason is the accumulation of foul and heated air at the highest point, where it can find no escape.

The long white carrot, which has now become cultivated by many farmers and found very productive, is more exposed than the orange, and should therefore be gathered first. In dry winters, and on dry soils, the orange will often remain through the winter without injury, but this result cannot be relied on, and all roots for spring feeding (except parsnips) should therefore be timely secured.

The most successful mode of preserving large quantities of potatoes which we have witnessed, is to bury them in large heaps, and cover them first with straw thick enough to form a coating of *one foot* when *well packed.* A covering of earth or turf three inches thick over the straw, was found amply sufficient to exclude frost; while the absorbing power of the great mass of straw prevented any injury from dampness, and the thin coating of earth admitted good ventilation.

Underdraining may be performed to advantage on all soils not too wet. There are many portions of the farm that are too hard to ditch during the dryer season, that have now become sufficiently softened by the autumn rains to work advantageously. Let as much of this be done as may be practicable, and next summer's crop will tell the result.

Plowing in autumn has several advantages. It divides the labor of teams, and enables them to perform while they are strong and vigorous, and during cool weather, a part of the work which must otherwise be done in spring, often under more unfavorable circumstances. It frequently admits of earlier sowing of spring crops by a week or more,—a difference which often makes a great increased amount. We have known a delay of ten days to diminish the oat crop more than half, as compared with earlier sown fields. Autumn is especially adapted to the deep trench plowing performed with the Michigan plow, by the exposure which it gives to the newly turned subsoil, as well as in consequence of the increased facilities for a strong draught at this season.

Wheat fields are often much injured by snow-water standing upon the surface early in spring, in large puddles which cannot escape. Surface furrows should be well cleaned out before winter so as to admit of the ready draining of these bodies of water.

Ample preparations should be made for shelter to domestic animals during winter. Sheds, stables, sheltered yards, feeding-racks and feeding-troughs, often save in a single winter their entire cost, by avoiding the needless consumption of food to impart warmth, and by preventing a waste of fodder under foot.

Manure is always valuable, but pork brings a higher price in market per hundred weight. Therefore avoid the wasteful practice many have of converting corn into manure, which should be made into pork. To prevent this waste, procure those breeds of hogs that yield a large quantity of pork for the amount of food consumed; or in other words, those that work it up into flesh, instead of merely chopping it into manure. A great saving is also made by fitting the corn for food by cooking, by which a much larger portion is digested, assimilated, and converted to pork, than by feeding uncooked corn.

The coming winter will be scarce of fodder. Much straw will be consumed by cattle, which in ordinary circumstances would be used for litter and converted directly to manure. Hence it will be advisable to draw from the woods all the fallen leaves that may be had, so far as time and team will admit. A high box to the wagon like that used for charcoal wagons, rakes, and large baskets, will greatly facilitate the work. Leaves make excellent bedding and excellent manure, more easily spread and mixed with the soil than when long straw is used.

Cattle often suffer in winter for want of water, and prefer going without for a time to travelling a half mile for it, exposed to dogs and other annoyances. Provision, if not already made, cannot be secured after the earth is frozen up. Timely care should therefore be taken in this particular. Good milk, sweet butter, and healthy and thriving animals depend more on pure wholesome water than many suppose. Care should for this reason be taken to have clean troughs; and every night the water should be withdrawn by means of a plug, so that it need not freeze, and to admit of a clean, fresh, un-iced portion the next morning.

Straw-cutters should be provided. It is true they are often thrown aside, but this is for two reasons. One is, that in this labor-saving country, every one endeavors to abridge his work as much as possible, and often more than is profitable, as in this instance. Straw, with some hay chopped up together, with a slight addition of meal or shorts, saves not only in food, but keeps animals in fine condition, if the other requisites of thrift are preserved. These other requisites are, regular food, cleanliness, fresh air, shelter, water, and all the other *ingredients of comfort.* Another reason of straw cutters being thown aside is the too frequent use of those only for corn-stalks that cut an inch or more long, instead of only a fourth of an inch. When the stalks become quite dry, cattle have a dislike to eat them, even when cut short; which may be avoided by filling a hogshead with the chopped materials, and pouring hot water over them from a Mott's furnace, or other heater, and keeping in the steam until they become well soaked, by means of a tight cover. The addition of a little meal, well mixed with them, will make them palatable.

All hardy fruit trees, and particularly apple, may be transplanted with great advantage in autumn—banking up the earth in the form of a small mound about them to stiffen them against the wind, if they are of moderate size; and staking them if large. Other young trees should be similarly embanked to exclude mice—the most perfect method. Grapes may be pruned and grafts cut; and manure may be now applied to trees better than at any other season of the year, as it will become well soaked into the ground by the commencement of growing.

A general supervision should be kept of the premises, and preparations made for winter. Leaky roofs should be repaired; loose boards on barns and fences nailed fast; sagging gates righted; broken windows furnished with glass; stables made secure against cold currents; stove pipes guarded from the danger of fire; chimneys cleaned of soot; cellars protected from the effects of decayed vegetables; and a general and particular vigilance pursued in relation to the care and management of the premises, preparatory to the arrangements for another year.

The Connecticut State Fair.

The State Agricultural Society of Connecticut held their first Fair at New Haven last week. As the first, it was very successful; and indeed in many particulars it would have done honor to years of experience in Fair arrangements and direction. The grounds were easy of access, the city never so full of people, nor the people ever more orderly or more generally satisfied. The weather, which was fine on Tuesday and Wednesday, threatened a little Thursday, which may have somewhat lessened even the large attendance on that day. This was variously estimated,—the lowest and we think the most correct calculation, ranking it, when the most were present, at 15,000. The exhibition of Working Cattle was of course the main point in a State which gives so much attention to this important particular in farm economy. The grounds contained about 25 acres. A building now nearly completed for an Orphan Asylum, was situated in the northern part, and well fitted up for the show of Domestic Manufactures. The track ran around most of the other buildings, while the stalls and pens were ranged about the sides. This track, too, was a very fine one,—a half-mile in length and prepared with the utmost care. The tents—the same, we were told, that were recently used at Philadelphia—were also commodious in situation and fitting up.

Entries of CATTLE were made by about 218 individuals. *Devons* and crosses with them, predominated both in numbers and excellence. Among the exhibitors of pure animals of this breed, imported and home bred, Messrs. S. & L. HURLBUT, of Winchester, deserve principal mention. They have each spent nearly a life-time in breeding good and serviceable cattle both for their own dairy purposes and for sale. Out of a herd of about 75 they were compelled by want of accommodations on the part of the railroads, to bring only 16 for exhibition. And we may take occasion to say here, that the Connecticut R. R. companies would have been wiser, both as regarded their own interests at the time, as influencing attendance on future occasions of the kind, and indeed even the ordinary travel on their roads, if they had taken a *little* more pains to make respectable provision for transporting articles for exhibition and the people themselves. It was a general complaint that many were prevented from attending on this account, and we can speak from our own knowledge of trains having been detained to almost double their table time by want of locomotive power.

The best of the aged animals shown by the Messrs. H. was by far their imported bull, "Albert." His merits, especially as regards breadth of back and chest, were good. His progeny were all strongly marked with the same points, and two yearling bulls among them deserve particular commendation. It is proper to state that "Winchester," Mr. Deforest's 1st prize 2 year old Devon bull at the recent New-York fair, and Mr. Steward's "Empire,' which took the 2nd prize in the same class, were both from the stock of the Messrs. H. Mr. J. M. BLAKESLEE, of Watertown, was another Devon exhibitor. His cattle were for a long time among the most successful at the shows of the Am. Institute, and his show, which consisted of 30 head, was marked by very general excellence. Mr. B. has also 36 head now attending the fairs of Virginia and other southern states. Among other exhibitors of this breed, were Messsrs. E. T. Linsley, West Meriden; F. W. Cowles, Farmington; S. Griswold, Torringford; and Messrs. Phelps & Cook, from Litchfield Co.

Other breeds present were not so noticeable. Robbins Battell of Norfolk, exhibited *Ayrshires*; J. T. Norton, his imported *Alderneys*; and T. S. Gold, West Cornwall, and E. B. Bishop, New Haven, *Durhams* of very fair quality.

Among the *Working Cattle*, foremost in attracting public attention, was the PORTLAND team, numbering 22 yoke. We understand the heaviest pair weighed 5120 lbs., and were owned by Jos. Hall. There may, however, have been heavier ones among them. Mr. N. B. Smith, of Woodbury, among whose cattle we noticed a good pair of 2 year old Devon steers, and Mr. Willis Smith of Torringford, were among other exhibitors. We do not wish to offer any criticism where all were so nearly on a par. Suffice it to say that we have never seen, and we think there has never been in this country, a show of oxen more superior in themselves and in their training.

HORSES were present in goodly numbers, though containing few specimens of more than ordinary merit. Among exhibitors we notice R. Battell, Norfolk, who showed 3 stallions of the Morgan blood, one of which was sired by Black Hawk, and a four year old mare with yearling colt; Enoch Coe, Middletown, for a four year old Morgan Stallion; S. and L. Hurlbut, for a pair of Blacks, 16 hands high, and serviceable animals; Walter Booth, Jr., Meriden, for a pair of Bay Carriage Horses; Capt. Foote of New Haven, for a team of four,—the wheel horses being a large and handsome pair, and the leaders a showy span of black Ponies; and A. N. Hungerford, Wolcottville, for a pair of 8 year old black ponies. The dog cart of Mr. Arthur Bronson, Greenfield Hill, with tandem team, attracted considerable attention.

Of Mules, E. Bishop & Sons were the only exhibitors. They showed a team of four, which we have already commended in our account of the New-York Fair. We may in connection, correct an error there, by which a "very large number" of the mules shown were apportioned to Mr. J. L. Jackson. He had but four pair on the ground,—which were, however, very fine heavy animals, and which as we have been informed, were purchased of Mr. Bishop for $1600.

Sheep were not very largely represented. There were the New Oxfordshires of J. T. Andrew, and T. L. Hart, West Cornwall; the Silesion Merinos of Geo. Campbell, Westminster West, Vt.; French and Spanish ditto, shown by L. & A. Whiting of Torrington; South Downs, shown by Dr. T. S. Gold, of West Cornwall; and the imported Sheep of Bennett Peck, Woodbridge. Natives and Grades were tolerable in numbers and quality.

Mr. Andrew's stock included a yearling Buck which took the first prize both at the New-York and New Haven fairs, and a ewe recently imported from the herd of the Duke of Buccleugh. Marcus Smith, Cornwall, and George Hitchcock, Washington, were also exhibitors of New Oxfordshires; and we were told by Mr. Andrew, that of $45 offered in premiums for long-wooled sheep at the Connecticut fair, his stock and its descendants, in the hands of different individuals, took $40. Mr. Campbell's Silesians were first premium sheep at New-York, and obtained a like honor here.

Swine.—These were very few, and included nothing of decided superiority. The Suffolks were predominant, and among exhibitors of these, we have the names of P. T. Barnum, Bridgport, Henry Olmstead and S. E. Chapman, Hartford. Mr. Chapman's Imported Sow was a good animal. We may mention here the "Model Pig Pen" of R. M. Abbe, as it was called. It was in fact a model *trough* for their feed,—having a *fender* above, both to keep them from getting into it, and to be gauged in height to admit big or only little pigs as is wanted,—thus preventing the large from monopolizing all the food. We heard it highly recommended and should judge it a valuable addition to the piggery.

The Poultry Department was not so largely represented or so worthily as it might have been. The principal exhibitors were J. G. North, New Haven, whose fowls did not compete for premiums, as he was on the Examining Committee, and P. T. Barnum of Bridgport, who took the first prize for the largest collection. We noticed a beautiful pair of Ebon Game Fowls, but have lost our memorandum of the owner's name.

The tent devoted to Fruits and Flowers was neatly arranged. Among the exhibitors of the former were Hovey & Co., Boston, with their table-load of Pears; Solomon Porter, New Haven, who had 45 varieties of apples, constituting a fine show, 6 of Peaches and several of Pears; Charles Robinson, who had a good assortment of Pears; C. B. Lines, with 46 varieties of the same; C. W. Kellogg, with a splendid basket of Pippin apples, and Norman Kellogg with fine Greenings. The show of Apples was excellent, that of Pears good. Foreign Grapes were shown by Jos. Eldridge, Jr., Norfolk; Jas. Craig, who had other fruits beside; P. H. Ashton, Middletown, and E. E. Clarke, New Haven. Dr. Eli Ives showed 6 varieties of Seedling Pears, which appeared well, though we had no opportunities to judge further. S. and L. Hurlbut exhibited a seedling apple of their own raising, and called after their name,—of fine appearance, ripe from Nov. to Jan., and ranked by Cole in the first class. Of Flowers there was not a large show, nor so fine a one as we had anticipated. There were, however, some pretty bouquets and floral designs. A cornucopia of grasses, said to contain 100 varieties, shown by A. P. Munson, attracted considerable attention, as did also a pomegranate tree contributed by Dr. E. H. Bishop.

Of the Vegetables we may say without hazarding any blame for extravagant compliment, that they were very considerably superior to those shown at New-York. The assortment included about the same number of exceedingly bulky pumpkins and snaky cucumbers, but more and better of some other varieties of garden produce. Ira Twiss, Meriden, with several bags of wheat, buckwheat, and rye flour; Mr. Gilbert, Hampden, with barley and various vegetables, and Wm. A. Clarke, Bethany, who exhibited several varieties of potatoes and corn, raised from reclaimed swamp land without manure, were among those who brought of their harvests to fill this tent.

The Dairy was fairly represented,—our friend J. T. Norton, Esq., taking the first prize for Butter, and H. Morse of Litchfield for Cheese.

There was a good show of *Agricultural Implements* made by Messrs. Munson & Johnson of New Haven,—they and others contributing about the same variety as was present at other fairs of the season. Russell's Mowing Machine was among the new claimants for popular favor. Its construction seemed simple; the knives are reversible, so that one edge being dull, the other can be used, and we do not see any reason why it should not do good work. Halliday's Wind Mill, of which we give a cut in this number, was also on exhibition.

Domestic Manufactures were well represented, but we have not room to speak of them at large. Suffice it to say that they drew a large share of attention, especially from the ladies present.

We cannot close without referring to the exertions of Mr. Henry A. Dyer, Secretary of the Society, to whom as well as to Mr. S. H. Huntington, President, and Prof. John A. Porter, Treasurer, great credit is to be awarded for the success of this first anniversary of the Farmers of Connecticut. We are ourselves under obligation to them for attentions during the days of the fair, which we wish to acknowledge. Should the future of their nursling be as brilliant as has been its first entrance on the world, they will have little cause for regret for the association of their names with its early management.

We should estimate the receipts from what sources of information were at our command, as ranging in the neighborhood of $8,000. Official returns will not, we think, vary much from this figure.

WEIGHT OF TURKEYS.

The following is an accurate statement of the weight of ten turkeys, under the different states of progress, from their live weight to being completely dressed. I have made repeated observations of the kind, with similar results. They were fed as usual the night before they were killed, but not on the morning of that day.

The first column of figures shows the live weight—2d, after they were bled—3d, after they were picked—4th, after crop and entrails were removed, and heads taken off.

lbs	*oz.*	*lbs.*	*oz.*	*lbs*	*oz.*	*lbs.*	*oz.*
6	4	6	0	5	8	4	13
8	10	8	4	7	11	6	10
8	2	7	11	7	2	6	2
14	8	14	11	13	4	13	
14	8	14	11	13	4	11	8
12	4	11	12	11	0	9	8
13	12	13	12	12	3	11	5
13	12	13	12	12	4	10	7
14	0	13	6	12	13	11	7

The last weight was for two small ones taken together; these two and the three first were the only hens. The ten crops weighed 10 lbs., and the ten heads 3 lbs. C. T. C

Notes for the Month.

Marl in Albany County.—Mr. Philip Myers of Bethlehem has recently discovered a rich bed of marl upon his farm about five miles south of this city. It covers an extent of five acres, and is overlaid with from three to five feet of peat or muck. The marl varies in depth from one to five feet, and is of a superior quality. He submitted a specimen to Prof. Dakin for analysis, who finds its composition to be as follows:

Carbonate of Lime,	66.21
Phosphate of Lime,	15 03
Organic Matter,	10.81
Silica,	7.95
	100 00

Prof. Dakin thinks the marl might be used to advantage in the manufacture of phosphoric acid, or it might be burned at a profit for mercantile lime. The marl in its present state is valuable as a fertilizer on all soils which require lime, and the peat which covers it is also very valuable on light soils.

State Poultry Show.—The New-York State Society for the improvement of Domestic Poultry, are to hold their second annual exhibition at *Utica*, on the 28th, 29th and 30th days of November. Premium Lists and any information desired in respect to the exhibition, may be obtained by addressing D. S. Heffron, Prest., or R. U. Sherman, Sec'y of the Society, Utica.

The Pennsylvania State Fair, which was held at Powelton, near Philadelphia, last week, was one of the most successful in every respect, that has ever been held in this country. Though none but members, or those who paid $1., were admitted the first two days, yet the attendance was very large; but on Thursday, when the charge was reduced to 25 cts, nearly Fifty thousand Single and Family tickets, were sold, and it was estimated that at least 100,000 persons visited the grounds during the day

New-Hampshire State Fair.—This Fair was held at the same time as the New-York Fair. The storm affected the first days, and kept many away. A correspondent of the Tribune, says the attendance was good on Thursday and Friday, and on the whole the result is favorable. The show of working-oxen was large, and animals splendid. The display in the fruit department was quite extensive. The fine specimens of the varieties exhibited gave strong indications that New-Hampshire is gaining ground, and begining to appreciate the worth and importance of practical improvements in fruit-growing. The address was by Simon Brown, editor of *The New England Farmer*, a practical man, upon the "Practical Features of Agriculture," which he treated in a remarkably practical, utilitarian manner, suited to the taste and abilities of all classes. What rendered it the more palpable to the understanding was his method of making it entirely a matter of dollars and cents, proving satisfactorily that investments in improved stock, and superior tools, were sure to pay good dividends, while outside speculations in railroad and bank stocks, &c., were very liable to involve the parties in difficulty and embarrassment. His plan was for each person, whether farmer or mechanic, to use his surplus of receipts in the enlargement of his own business, with the workings of which he must be better acquainted than he could be with speculations of any other kind.

Cure of Potato Rot—What Next?—We have lately received a *very* small pamphlet, containing five minutes reading, with the imposing title, "A scientific exposition of the cause and cure of the potato rot, by J. N. Chandler Adrian, Michigan. Price 25 cents." The author informs us in this work, that all other theories of the rot, have "signally failed in ascertaining the hidden cause;" but that here the reasons are so clearly pointed out, that you will wonder with surprise that you had not seen it before."

We do not wish to infringe upon the author's copyright by copying the whole of its contents; but we would remind him, that some of the newest varieties of the potato, obtained from seed, which he thinks are so secure against the disease, have proved quite as liable as older sorts, and much more than some. There are some varieties which are scarcely affected, and there are others that are often entirely ruined; but their age appears to have nothing to do with the matter, for both the young and older classes of varieties, each contain those of all grades of liability to the disease. This theory is by no means new; it was advanced many years ago by others.

As to the electric condition of the atmosphere being affected by iron in the soil, and thus saving the roots, the sheer absurdity of this notion is evident when we state that the oxides and hydrate of iron, (nearly the only form in which iron exists as an ore or mineral,) are quite fair *non-conductors* of electricity; and that moist earth, so well known to be injurious to the potato, is an incomparably better conductor than the above named compounds of iron. So much for this "*scientific*" exposition. The truth is, there is a lamentable want of scientific knowledge among nearly all classes of writers and non-writers, so far as the principles of elictricity are concerned, which accounts for the many attempts made to explain every thing that appears inexplicable, by referring it to electricity, withont the slightest real knowledge of the true rationale.

Shell Marl.—Allow me to invite attention to the advertisement of S. B. Raymond & Son. I have used their shell marl the past season on garden vegetables, and am so well satisfied of its richness as a manure, that I purpose to use it extensively. Its discovery will add materially to the stock of fertilizers in this section. I hope the lovers of good crops abroad, will avail themselves of its cheapness to order and test it. An article in the Edinburgh Encyclopedia, says "shell marl is composed of animal shells dissolved; contains oil, affects the soil like animal manure, increases the food of plants, aids the soil in attracting food from the air and prepares the vegetable food for entering the roots of plants." This marl is so rich in carbonate of lime, an active stimulant, that it must mix advantageously with the animal manures of the farm yard. If so, we have discovered an invaluable mine. H. W. Bulkeley *Ballston, Oct.* 5, 1854.

Ice House and Dairy.—Can you or some of your numerous contributors, inform me if I can erect an ice house on the north side of a dairy-room, and opening into it, so as to admit of putting cream and milk either in, or in close proximity to it, so as to get the cool air from it. If so, how would be the most economical way of building the same? would it be better to drain it or not? Any information upon the subject, will be gratefully received by A Young Farmer. *Charlotte, Vt.*

[If any of our correspondents have had any experience in this way, will they please communicate the mode and results?]

Large Squashes.—At the Fair held in Berlin, Rens. Co., on the 6th inst., Mr. B. B. Hewitt of Petersburgh, exhibited four Squashes grown from one seed. Their weights were as follows—11½ lbs.—103½ lbs.—57 lbs.—38½ lbs.—which makes in the aggregate 310½ lbs. The vine with its branches measured 402 feet in length. C. R.

To Destroy Sorrel.—C. G. recommends the growing of buckwheat, and thinks that one good crop will effectually eradicate the sorrel, and leave the land in fine order. To prevent buckwheat from shelling out in harvesting, he says it should be cut and shocked when damp, and never be handled when dry, except when ready for threshing.

Canada Thistles.—A correspondent in Minnesota says that if Canada thistles are allowed to grow until near flowering, the larger the better, and then cut off about three inches above ground, the rains will fill the hollow stalks, and cause them to rot, and thus entirely destroy them. He says that when treated in this way, he has never known them to sprout a second time.

A Cheap and Substantial Fence.

Messrs. Eds. Co. Gent.—I have made a fence by drilling into large stones, and putting in the half-quarter inch rods of iron firmly, in the drill holes—then place them along about eleven feet apart. Let the stones be placed crossways with the fence. Then take common rails, and bore inch holes in each end, and slip them down in the rods.

In this way, you see that the rails bear the same position as to distance apart, that they do in common rail fence. Its advantages are, a straight fence and a movable one, and its durability cannot be questioned. It takes less rails than the common rail fence. I think saving of rail will buy the iron rods, and any farmer's boy can do all the work. The rails when they connect, being straight, do not cut each other off as in the common rail fence. If thought best, the stems might be bedded into the ground some. I fill between the stems with small stones, upon which rests the bottom rail. Farmers, try it. C. W. *Lake Grove, N. Y*

County Fairs.

The Cayuga Co. Ag Society held its Fourteenth Annual Fair at Auburn, Sept. 20 and 21. The attendance is stated to have been greater than on any previous occasion; the weather was propitious, and the pecuniary results seem to have been satisfactory.

Among the exhibitors of pure bred Cattle, we notice the well known names of Messrs. John R. Page, J. M. Sherwood, Henry Fellows, Hezekiah Bowen, Rufus Remington, Wm. Wise. Wm. Webster, Nathaniel Lynch, Dr. Rotton, and Messrs. Gould, Cornell, Truesdale and others.

Several of the same gentlemen were also exhibitors of Sheep, Hogs, and Poultry.

The show of Fruits is said to have been very good, as well as that of Vegetables and Flowers.

The prizes for ladies' riding, were the objects of general interest and formed the grand finale of the whole. For them, there were eight competitors, to one of whom the credit must be given of having introduced rather a new feature in such displays. Miss Henry of Moravia, rode the most spirited animal on the field *without saddle or stirrup*, and what is the best of it, the judges did not discover her peculiar non-equipment until she was retiring from the ring. They could not do less than award her a special premium, which they incontinently did,—and the *Auburn Journal* says that certain gallant citizens are about to present her a gold watch as an additional token of the public appreciation of her equestrian skill.

Herkimer, we believe, was the first in the field this year, having held its fair at East Winfield on the 7th and 8th Sept., which appears to have been very successful, the weather having been fine and the attendance large.

On the 13th. 14th and 15th, the annual Fairs of Cayuga, Chautauque, Cattaraugus and Yates, were held, but we have no reports from them.

Cob Crushers.

Are there any machines made in your section of the country for crushing corn in the cob for feed. If so, what is the expense of them, &c Any information you can give me on this subject, will be thankfully received. J. T. J. *Mishawaka, Ind.*

These machines are made at Rochester, N. Y., but we cannot furnish the manufacturer's name. They may be ordered through J. Rapalje & Co. of that place. The expense, we believe, is about thirty dollars.

Hogs in Indiana.—The Cincinnati Price Current says that the assessors' rolls in Indiana exhibit the following comparison of the number of hogs in Indiana during the summers of 1853 and 1854:—

1853	1,580,456
1854	2,168,833

This does not look as if we were to starve for the want of Pork to feed upon.

Prolific Ear of Wheat.—An ear of wheat, taken from the field of Wm. Story, Doncaster, England in August last, contained 111 perfect kernels: beside several shrunken ones

RURAL PUBLICATIONS.

THE COUNTRY GENTLEMAN, published weekly, at $2.00 a year.

THE CULTIVATOR, published on the first of each month, at 50 cents.

As witnessing that the purposes of our Publications are successfully carried out, both to our readers who have already the evidence of their Contents, and to strangers who may on introduction like to look over our credentials before they take us to their homes as a Family Friend and Counsellor, we subjoin below a few extracts from the Letters of our Correspondents and the Notices of the Press. It is however proper to mention that notices or opinions of one will have equal application to both, as nothing appears in the Cultivator that has not been already published in the Country Gentleman, and we aim to make their mechanical execution equally good. Both are amply illustrated and neatly printed on fine and durable paper.

NOTICES OF THE PRESS.

Wayne County Whig.—"We are acquainted with no paper which better justifies the use of an elegant and appropriate title than the Country Gentleman. It is not only a model of typographical taste, but it is filled with well written and valuable articles, on every topic of interest to the practical agricultor, whether of acres or of rods. It is a paper of which Mr. Tucker, the veteran and pioneer of agricultural publications in New York, may be justly proud. We commend it with the greatest cordiality, to the attention of our readers."

Journal, Syracuse, N. Y.—"We however, can not do it more justice than by quoting what an old and intelligent farmer said of *The Country Gentleman*, in our sanctum the other day: 'It contains,' said he, 'every thing that a farmer wants to know, told in the best possible manner, and I mean to study it next to my Bible.'"

Jacksonian, Pontiac, Mich.—"It has never fallen to our lot to meet with a more interesting and readable paper of the the kind than *The Country Gentleman;* and we defy any man to rise from a careful perusal of it without feeling himself a wiser and a better man. The price is $2 per annum, and taking into consideration the great amount of reading matter in its columns, and the fact of its issuing weekly, it is the cheapest paper devoted to the same subject in the world, and we wish it God speed with a hearty good will."

The Northwestern Democrat, (St. Anthony, Min.,) "would heartily recommend *The Country Gentleman* to the enterprizing farmers who are cultivating, or preparing to cultivate, the broad prairies, beautiful openings, noble forests, or other fertile lands of Minnesota. Its Literary character is of the first order, its Moral tone is pure, the style of all its articles is chaste, it will prove itself a *Gentleman* in the most polished circles of society, and is worthy of a place on the best center table in the land."

Vermont Chronicle, Windsor, Vt.—"Its patrons may rely on the conductor's ability and enterprize, his excellent judgment and taste, and purity of moral sentiment. It is a beautiful and every way excellent paper, and we cannot doubt its success"

Free Press, Burlington, Vt.—"*The Country Gentleman*, published weekly by Luther Tucker, Esq., at Albany, is a journal of great merit. We hope it gets, because it deserves, an extensive patronage."

Ohio Cultivator, Columbus, O.—"Mr. Tucker is the most experienced and successful publisher of agricultural papers in the Union, having been nearly a quarter of a century in the business."

The *Hudson Gazete*, pronounces it "decidedly the best Agricultural publication in the country."

The *Winsted Herald* says—"On all matters pertaining to the occupation of the Farmer and the Horticulturist as well as to Domestic Architecture and the Country Fireside, it is without a rival."

The *Woonsocket Patriot* says—"It is the neatest as well as the best paper of its kind."

Daily Democrat, Chicago, Ill.—The Cultivator, is one of the oldest and best agricultural journals in the country. Through a long series of years it has preserved a wide spread popularity among the farmers of New York and the adjoining States. In addition to the able and experienced pens its editor, Luther Tucker, Esq, and his assistants, it has always had a large number of correspondents from among the practical agriculturists, the valuable results of whose experience are thus given to the readers of the Cultivator."

The Herald and Free Press. Norristown, Pa., says of *The Cultivator*. that it is "well known as among the best works of the kind in the country."

The Southern Mirror, says "*The Cultivator* is by far the best agricultural journal in America. It is elegantly illustrated, and every part is well filled."

EXTRACTS FROM LETTERS.

From a gentleman in Massachusetts distinguished for his scientific attainments and his practical skill as an agriculturist—"I cannot close without expressing the gratification I feel in reading the Country Gentleman from week to week. If the hearty approbation of a single reader is of any worth to you, you have mine *most heartily*, I assure you."

From a subscriber in Western New York—"I consider the Country Gentleman the best paper for farmers I have yet seen."

From a subscriber in Ohio—"Let me say to you, that I think the Country Gentleman decidedly the best Agricultural paper in the country, and I have seen and read many, for their name is legion."

From another subscriber in Ohio—"I value the Country Gentleman as the BEST OF SIXTEEN Agricultural papers which I take."

From a subscriber in Maine—"I like your paper more and more every day, and I liked the first number very much."

From a subscriber in Illinois—"I prefer the Country Gentleman to any of the Agricultural papers I am acquainted with."

From a subscriber in Connecticut—"It is perhaps unnecessary for me to say how much I have been pleased and instructed in reading the Country Gentleman."

From a gentleman in Vermont, distinguished both as a writer and an Agriculturist—"The Country Gentleman is, BY FAR, at the head of the Agricultural Journals of the United States."

From a subscriber in Michigan—"I cannot get along without it—in fact, it is the best paper I ever read."

From a subscriber in Kentucky—"Of all the papers I have ever read there is none in comparison to the Country Gentleman—you need not ask me for what, for it is FOR EVERY THING."

From a subscriber at Concord, Mass.—"Your paper is indubitably the best paper in the country."

A subscriber at Pittsburgh, Pa., says: "I read the Country Gentleman with much pleasure and profit; and I think there is but one sentiment among its numerous readers. and that is, that it is the leading agricultural periodical of ou country, useful and practical."

From another at Pittsburgh, Pa.—"I read the Country Gentleman with much pleasure and profit, and believe it to be one of the BEST agricultural papers in the country."

Another at Plattsburgh, in sending his subscription, says:—"I cannot refrain from expressing to you the great satisfaction I have had in reading the Country Gentleman. I consider it the most valuable family paper for the Farmer that I know of. and I cannot doubt but your list of subscribers will steadily, if not rapidly increase. If I can influence any of my neighbors to subscribe to it, I consider I am doing them and their friends a material service."

From a subscriber in Dutchess county: "I have taken the *Country Gentleman* since it was first published, and I think it the best agricultural paper I ever took, if not the best published in the land."

A subscriber in Essex County (Mass.) says.—"I cannot close this without expressing my admiration of the Country Gentleman. The manner in which it is got up is excellent; but its contents I think are unsurpassed by any similar paper in this country. This is saying a good deal, but it is my judgment, and I wish you all success for your exertion and untiring energy in the good cause in which you are engaged.

A subscriber writes from the neighborhood of Cincinnati: "I am convinced its circulation would do much good here—No one can read the fifteen or twenty good articles in each number without wishing to continue his acquaintance with such a familiar friend;—many of them worth, in themselves, many times over, the subscription price for a whole year."

Fresh Imported Dutch Bulbous Roots.

THE subscribers have just received in the finest possible condition, a large and very complete assortment of *Bulbous Roots*, embracing every desirable variety of single and double Hyacinths for flowering, in pots and glasses, or for bedding out.—Early *Roman Narcissus* (usually flowers about Christmas;) the best varieties of Polyanthus Narcissus; Crocus, some 25 named varieties; early and late, single and double Tulips: Jonquilles, Snow-drops, Crown Imperials, Fritillarias, Iris, Gladiolus, Ixias, Liliums, Double Narcissus, Ranunculus, Anemones, Arums, Pancratiums, Aconites, Colchicums, &c., &c.; all of the best qualities, imported to order, from the oldest and most extensive Flower Nursery in Holland, warranted sound, true to name and color, and at prices as low as are usually paid for inferior roots at auction—can be packed and safely sent to any part of the United States—A large assortment of plain and colored China and Glass Hyacinth Glasses, fancy Crocus Pots, &c, &c., always on hand.

Just published—Thorburn's Descriptive Bulb Catalogue for 1854, with prices and full directions for the management and cultivation of Bulbs in the parlor or garden, furnished gratuitously to purchasers and Post-paid applicants. *Wholesale* Price Lists, for dealers and nurserymen, on application.

J. M. THORBURN & CO.,
15 John-st., New-York.

Fresh Garden, Field and Flower Seeds, of the finest quality. Bird Seed of all kinds. Catalogues furnished, and dealers supplied on the most liberal terms. Oct 12—w4tm1t

SHELL MARL.

THE subscribers are now delivering their superior Shell Marl on the cars, at $2 per cubic yard.

Prof. Dakin of the Albany Medical College, gives the following analysis: In 100 parts, Carbonate of Lime 88¾, Organic matter 10, insoluble Silicious matter 1¼ *Richly nutritive and stimulant.* What fertilizer is offered more cheaply?

S. BRADLEY RAYMOND & SON.
Oct 12—w1tm2t* Jonesville, Saratoga Co N. Y.

Horse Powers and Threshers

OF all the most approved kinds—Wheeler's, Westinghouse's and Emery's Railway Powers and Threshers.

Taplin's, Bogardus', Palmer's and Eddy's Sweep Powers and Threshers. For sale by LONGETT & GRIFFING,
Sept. 1—m3t No. 25 Cliff street, New-York.

SPANISH MERINO SHEEP.

THE subscribers offer for sale 12 Bucks, and 15 Spanish Merino Ewes, at very reasonable prices.

A part of the sheep are a cross of the Atwood flock. A rare opportunity is afforded to farmers to improve their flocks at a small expense.

L. S. & L. R. WELLS,
New Britain, Ct. Aug 17—w1tm3t.

Asiatic Fowls for Sale.

50 PAIR Brahma Pootra; per pair........$3 to $5
50 do. Buff and Red Shanghai; " ....$2 " $4

All perfectly healthy and warranted pure bred. References—Dr. John H. Cole and S V. C Van Rensselaer.

E. G. STUDLEY
Sept. 7—w1tm1t. Claverack, Col. Co., N. Y.

Fruit and Ornamental Trees,

At the New Canaan Nursery, situated in New Canaan (Ct.) 3 1-2 miles from Norwalk R. R. Depot.

THE subscribers offer for sale, the coming Autumn and Spring, one of the largest stocks of FRUIT TREES in New England, carefully grown and propagated by ourselves.

Our stock consists in part of 40,000 Appple Trees, of suitable age and size for transplanting, of the most popular varieties.

15,000 Peach Trees, one and two years from the bud, of a healthy origin.

Also a stock of Pear, Plum, Cherry, Apricot and Quince Trees.

Red Antwerp, Franconia and Fastolff Raspberries.

ORNAMENTAL TREES, Norway Spruce, Balsam Fir, Arborvitæ Scotch Pine, Horse Chestnut, Mountain Ash, Larch, and various others.

50,000 Appple Seedlings, 2 years old.

Persons wishing to purchase in large or small quantities, will find it to their interest to communicate with us

STEPHEN HOYT & Co.
New Canaan, Ct.
Sept. 1, 1854—w1tm2t.

Albany Agricultural Works,

Warehouse and Seed Store, 369 and 371 Broadway, Albany.

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"*Emery's Patent Changeable Railroad Horse Powers.*"
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.
Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.

RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co

Choice Poultry for Sale.

BRAHMA Pootra or Chittagongs—Royal Cochin Chinas—White, Black, Buff and Brown Shanghaes—Black Spanish and Gold and Silver Polands, all warranted pure blood, and of the best importations in the country, or from specimens which took the first and second premiums at many of the recent exhibitions.

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Sept. 1—w&m3m.

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BEST Peruvian Guano—
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Ground Plaster, suitable for agricultural purposes—
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Feb. 9, 1854—w&mtf . cor. of Chatham st., Boston.

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From the numerous and strong commendations, of distinguished men and the newspaper press, we select the following:

Extracts from a letter from Hon. John H. Clifford, Ex-Governor of Mass.

NEW BEDFORD, May 11, 1854.

DR DADD,—Dear Sir:—I hope your new work on the noblest creature that man has ever been permitted to hold in subjection, (the Horse) will meet with that success which all your efforts in this direction so well deserve.

Your obedient servant,
JOHN H. CLIFFORD.

From Hon. Marshall P. Wilder.

BOSTON, May 13, 1854.

DR. DADD,—My Dear Sir:—I am greatly obliged to you for the valuable treatise, the results of your own investigations, which you have recently issued. Hoping that it may meet with the patronage of a discriminating community,

I remain yours with great regard,
MARSHALL P. WILDER.

The *Modern Horse Doctor*, by Dr. G. H. Dadd, is a manual of genuine science, and ought to be owned and studied on the score of humanity, as well as interest, by every man who owns a horse.—*Boston Congregationalist.*

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The author of this work is well known as a most skillful veterinary surgeon. His book is based on the soundest common sense, and as a hand book for practical use, we know of nothing to compare with it.—*Yankee Blade.*

We know Dr. Dadd well, and are satisfied that he possesses most important qualifications for preparing such a book as this.—*New England Farmer.*

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This is one of the most valuable treatises on the subject, ever published; and no owner of that noblest of the animal race, the horse, should be without it. Especially should it be in the hands of every hotel and livery-stable keeper. To many a man would it be worth hundreds of dollars every year.—*Ind. Democrat, Concord.*

By far the most learned and copious work on the horse and his diseases we have ever seen.—*N. Y. Evangelist.*

One of the greatest and most commendable qualities of this work, is, it is *practical* and plain to the comprehension of those farmers and others for whom it is mainly designed. The course of treatment favors generally a more sanative and rational system of medication than that recommended in any previously existing works on farriery. No farmer or owner of a horse should be without this book. Stable keepers, stage proprietors and hackmen we believe would derive profit by having at least one copy hung up in their stables for use and reference by their stable men.—*Daily News, Philadelphia.*

There is more common sense in this book than any of the kind we have ever seen, and farmers and owners of horses would find it a matter of economy to possess themselves of it. It will be of more service than the counsel of a score of ordinary doctors.—*Albany Courier.*

We deem this decidedly the best and most reliable work on the 'Cause, Nature and Treatment of Disease and Lameness in Horses," ever published.—*Nantucket Inquirer.*

What we have read of this book induces us to regard it as a very sensible and valuable work; and we learn that those much more competent to judge of its value, have given it their unqualified approval.—*Evening Traveler, Boston.*

This book supplies a great desideratum which Skinner's admirable treatise on the Horse did not fill. Every man may be his own veterinary surgeon, and with much greater safety to this noble animal, than by trusting him to the treatment of the empirical itinerants who infest the country. It is well illustrated, and should be purchased by every man who owns a horse.—*Ev. Mirror, N. Y.*

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YALE SCIENTIFIC SCHOOL.

THE FALL TERM in this Institution, will commence on Wednesday, Sept. 13th, and continue fourteen weeks.

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JOHN A PORTER. Dean of the Faculty.
New-Haven, Ct., Aug. 17, 1854—w4tm3t.

GUANO NOTICE.

AS there is a substance now selling by some dealers in this city and Brooklyn, for the No. 1 Peruvian Guano, we caution the agricultural public who may purchase Peruvian Guano this season, to observe that every bag of the genuine article will have the following brand:

NO. 1,
PERUVIAN GUANO,
IMPORTED BY
F. BARREDA BROTHERS.

The price is now established for this season, at $50 per ton of 2,000 lbs When taken in lots of five tuns and upwards, a discount will be made. LONGETT & GRIFFING,
State Agricultural Warehouse, No 25, Cliff-Street
Aug. 17—w6tm2t New-York.

Land for Sale.

THE subscriber offers for sale, a portion of his valuable Tract of Land, situated in the county of Fairfax. Virginia, on. and near the Turnpike leading from Georgetown to Leesburgh, 16 miles from the city of Washington. 2 miles from the Potomac river and canal, and within 2 miles of the Londoun, Alexandria. and Hampshire Rail Road. The tract contains about 2000 acres of Land; of which, from 500 to 600 are in a heavy growth of oak and chestnut, and the remainder of the wood land is in pines of the second growth. It is of a deep red soil, and adapted to Grain, Plaster, Clover, and all kinds of Grass. On the premises are 4 comfortable Dwelling-Houses, and also a Grist-Mill, but not in running order. The land will be sold in lots of 100 or 200 acres, or as the purchaser may desire. For further particulars inquire of the subscriber on the premises.

S. S. MILLER,
July 1, 1854—mtf Spring-Vale. Fairfax Co., Va.

Agricultural Books,

For sale at the office of the Country Gentleman.

Contents of this Number.

THE FARM.

Announcement for 1855, 329
Economy of Manures, 331
Securing Corn Fodder, 331
Discordant Views—Subsoil Plowing, 332
A Durable Fence—To Kill Liveforever, 332
Mediterranean Wheat, by F. D. C., 333
Rensselaer Co. Fair, 334
Vose's Patent Ox Yoke, 334
Influence of Ammonia on Vegetation, 335
Guano and Stable Manures, by C. B. CALVERT, 337
Albany Co. Fair, 337
Lime on Meadows—Millet—Peat Ashes, 339
Experiments in Wheat Culture—Thorough Tillage, 341
Cheap Ice-House—Large and Small Potatoes, 341
Effects of the Drouth, by W. H. BREWER, 342
Slate for Roofing Purposes, by R. MERCHANT, 342
Plaster of Paris as a Fixing Agent, by W. H. BREWER, 344
The State Fair at New-York, 346
Treatment, Value and Application of Manures, 349
Sundry Hints for the Season, 352
Connecticut State Fair, 353
Notes for the Month, 355
A Cheap and Substantial Fence, 356
County Fairs—Cob Crushers, 356

THE GRAZIER.

The Yorkshire Cow, 333
Cheap Food for Pigs, 333
Portuguese Pig, 344
The Shanghais, by MARTIN BURRELL, 351
Gapes in Chickens—Setting Hens, 351
Live and Dead Weight of Turkeys, 354

THE HORTICULTURIST.

Black Knot on Plum Trees, by F. D. C., 338
Prices of Pears—Hedges, 339
Notices of New Fruits, 340
Plan of a Kitchen Garden, 343
American Pomological Society, 343
Ohio Pomological Society, 343
The Concord Grape—A New Pear, 345

THE HOUSEWIFE.

Cure for Wasp Stings, 351
A Valuable Liniment, by C. G., 351

ILLUSTRATIONS.

Yorkshire Cow, 333
Kitchen Garden, 343
Vose's Patent Ox Yoke, 334
Portuguese Pig, 344

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☞ Editors with whom we exchange, will greatly oblige us by publishing the above, and sending us a copy marked.

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Improving and Planting Grounds,	21
Culture of Fruit,	40
Farm Buildings,	11
Farm Implements,	19
Improvement in Animals,	17
Laying out Farms,	3
Total Engravings,	122

It will be seen from this abstract of the contents of the *Illustrated Annual Register*, that it has been prepared with special regard to the wants of our rural population, and we hazard little in saying that it will afford more valuable information on several of the subjects of which it treats, than has ever before been presented at so small a cost. The chapters on Country Dwellings—Improving and Planting Grounds, and the Culture of Fruit, have been prepared by Mr. J. J. THOMAS, with his usual taste and ability, expressly for this work, and are each well worth more than its cost.

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THIRD To Improve the Soil and the Mind. SERIES.

VOL. II. ALBANY, DEC., 1854. No. XII.

PUBLISHED BY LUTHER TUCKER,
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A Word More to our Subscribers.

With the present number, the current volume of THE CULTIVATOR is completed, making the second of the Third Series, and the twenty-first from its commencement. We furnish with it as usual a full and careful index to every subject treated, and it will, when bound, make a volume containing matter of a value to every farmer, far beyond the low price at which it is furnished, as well as a handsome addition to his bookshelves, or the table in his sitting room. But our present business is rather with the future than the past.

As the annual subscription to THE CULTIVATOR is too small to admit of our keeping accounts with individual subscribers, or paying the heavy expenses of travelling agents from New-Brunswick to California, we are compelled to continue our practice of discontinuing all subscriptions at the end of the year; and hence it is that we are obliged year after year to make an appeal to the

Agents and Friends of the Cultivator,

to renew their efforts to secure the continuance and enlargement of our subscription lists. The

Illustrated Annual Register,

which we have now ready for distribution, has been prepared at a considerable and unusual expense, as a

New-Year's Present to Club Subscribers,

and we will send a copy of it, as already offered, to any of our friends who propose to exert themselves to promote the circulation of the Cultivator, and who will let us hear from them to that effect. As an inducement to greater exertion on the part of all who are disposed to act as agents, we offer

$275 in Cash Premiums,

as stated last month, to those who send the largest amount of cash subscriptions to our Journals previous to the 10th of April next.

Why may not You, Reader,

obtain one of the TEN for yourself? The smallest would pay your subscription to this paper for TEN YEARS, and the largest count as no inconsiderable item in the year's receipts.

We shall enter another volume with increased editorial facilities, and a renewed determination to devote that experience which we have been so long in acquiring, and every means which we can at present or in the future secure, to impart to our pages

Additional Interest and Value.

And we desire here to acknowledge the indebtedness, both of ourselves and readers, to the labors of our associate, Mr. J. J. THOMAS, of Macedon. Though he has always, since our connection with THE CULTIVATOR, been a contributor in a greater or less degree to its pages, yet for the last year more of his time and care have been devoted to them; and we are neither flattering him, nor indulging in any personal vainty, when we say that his contributions to our columns have seldom been equaled, as lucid, thoughtful and really practical articles, in the whole range of our agricultural literature. We are happy to say he will continue to give most of his time to our Journals, and in doing this we shall not need to assure our readers of their continued interest and value.

Nor can we close without returning our thanks to CORRESPONDENTS, who have kept us so well supplied with the results of their

Experience and Observation,

from every part of the country. While other journals have sometimes suffered during the summer months, like the soil of the farmer, from a drouth of what is most essential to life and spirit in their productions, owing to the kindness and care of these correspondents, our streams have seldom waned in strength or numbers. We trust we shall continue to awaken that interest in the agricultural community, of which a general contribution of communications and inquiries is both the index and the result. A man is not willing to give his thoughts to the world through a medium which may excite doubts of their reliability or with whose prosperity and interest he feels no sympathy.

And in asking of our Friends and Agents, and of Postmasters generally, to put forth renewed exertions for our paper, we can not fail to acknowledge our especial obligations for their past kindness in this way,—for repeated efforts, frequently made without other reward than the consciousness of the benefit they have thus conferred upon their neighbors, and of the part they have taken in combatting prejudices against a truly

Progressive System of Farming.

All this has not been without its good effects, but there is much more that remains to be accomplished. We are not obliged, like the ancient monarch, to sigh for other worlds to conquer. There is yet before us a world of error and prejudice, strong enough and large enough to employ our best and most hearty efforts. Shall we leave the battle unfought, or relinquish ground already gained?

In view of these considerations it is, that we express the hope of sending The Cultivator for 1855, to a very largely

Increased Subscription List.

We can but think that *very few farmers*, to whom the Annual Register is shown, who are told that they will receive with the 144 pages and 120 engravings which it contains, The Cultivator for the year, containing much larger, and nearly three times as many pages, and illustrations of no less value and beauty, and then asked to subscribe, can find it in their hearts to refuse so small a sum as Fifty Cents. It certainly makes them the cheapest works published. All we request or wish, is, that our friends will be good enough to do the asking!

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1. To the one who shall send us the largest amount of cash subscriptions to the Cultivator and the Country Gentleman for 1855, with the pay in advance, at the rate of Fifty Cents for each copy of the former, and One Dollar and Fifty Cents—(the lowest club price, where ten or more copies are taken)—for each subscriber to the Country Gentleman, previous to the 10th of April next, FIFTY DOLLARS in cash.

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For Twenty copies, and our new book, the Register, to each,	$10.00

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After one club has been ordered, agents may continue to send subscribers on the same terms—i. e., Fifty Cents each, for both the Cultivator and Register. To prevent mistakes, it may be well to number the subscribers, as they are sent in, 1, 2, 3, &c.

Great care should be taken to write the names and address of each subscriber distinctly, thus:

"John Smith, Washington, Berkshire Co., Mass."

☞ Specimen Numbers and Prospectuses will be sent to all who desire them.

To Subscribers in the British Provinces.—We inadvertently omitted in our last number to call the attention of our subscribers in the British Provinces to the fact that we have to prepay the American postage on their papers. Hence we are obliged to require them to remit *invariably* 26 cents additional on each subscription to the Country Gentleman, and 8 cents additional on each to The Cultivator. Hence our club terms to them for the latter will be—

20 copies, and the Register to each,	11.60

And for the Country Gentleman

3 copies,	$5.75
10 copies,	17.50

Chinese Pigs.—A correspondent wishes to know where he can procure a pair of pure Chinese pigs. Who can tell him?

Calamities Changed to Blessings.

Every intelligent and thrifty farmer has doubtless had occasion to observe the heavy losses of the *skinning system.* The man who gets twenty bushels of corn per acre off a ten acre lot, is compelled to plow the whole of this surface for 200 bushels; while he who obtains fifty bushels per acre has only four acres to cultivate for a like amount. And it usually happens that triple the labor is required to keep a single acre of the badly cultivated land clear of grass and weeds, as an acre in the finest tillage. If the ten-acre man barely gets enough to pay for cultivation, the four-acre man may realize a profit of about one hundred per cent. The same mode of estimate will apply to every thing else. If a poor cow yields milk and butter only enough to pay for her keeping, a good one yielding a double amount, affords a clear profit of all this surplus. Land-pike and Racer hogs, may consume three dollars worth of corn to make a dollar's worth of pork; Berkshires and Suffolks may yield two dollars worth of pork to every dollar's worth of corn fed skillfully. All these examples show that the most profitable farming is that which brings land into the finest condition, and which secures the most productive animals on a given amount of food. The increased value of the *principal*—that is of the land itself, by the most improving practice, should also be taken into the account.

Yet notwithstanding all this, a great multitude of farmers continue to pursue the most profitless of the two modes,—either from a want of energy or a want of knowledge. They barely make a living in many instances, and remind us of the man who said, "It takes me and my hired man, both working hard all the year, to raise enough to pay my hired man." Now, when in addition to this close struggle for a living, such calamities as the Hessian fly, the wheat midge, extraordinary drouths, &c., make their appearance, the case appears to be desperate; and yet we are not sure that the fly and midge, and the danger of drouth, may not become indirectly great improvers of our husbandry, and in this way prove substantial blessings to superficial farmers. "It's an ill wind dat blows no whar," said Shelby's black Sam; and possibly these calamities may yet compel some to be good farmers against their will.

In the eastern part of Long Island, the Hessian fly proved many years ago a great benefit to that region of country. The land was so constantly tilled, and so little attention was given to making manures, and to other modes of enriching, that on an average not more than five or six bushels of wheat were raised per acre. But this, small as it was, would pay the labor and expense. The Hessian fly put an end to this kind of husbandry, for no other way was found to prevent its depredations but highly manuring the land; the fly usually attacking the weakest plants, the vigor imparted by the manure saved the crop. Great attention was subsequently given to the manufacture of manure, and in many places the amount made was increased ten fold. The cackling of geese once saved the city of Rome; and in this instance, the buzzing of a minute insect placed thousands of dollars in the pockets of farmers.

We are much mistaken if the wheat midge or weevil does not do us some substantial good. Crops of wheat, which have been put in early, and in the best manner, in land not injured by previous mismanagement, have been but slightly affected. An energetic farmer of our acquaintance prepared his land last year, by first turning over *deeply* a good clover sod—then giving this a good coat of compost manure—then harrowing the inverted sod and compost into complete intermixture and pulverization—then turning the whole under with a gang-plow just deep enough for the roots of the young wheat, which was put in with a drill in the best manner. The whole of this was accomplished by the first day of autumn. Other crops on the same farm, after corn, were also well put in, but necessarily some weeks later, and in less favorable soil. Now mark the result. The first-named crop yielded the present season of drouth and insects, no less than thirty bushels of the finest wheat per acre—the other was only ten bushels per acre. Other crops in the same neighborhood, sown after corn with only ordinary care and tillage, produced but five bushels per acre. In one instance, when two fields were sown side by side, on similar land, at the same time, but with one of them thoroughly tilled with an especial view to the destruction of "June grass," the latter yielded nineteen bushels per acre, the former only ten. Examples may be multiplied to any degree, showing the great profits of the best modes of tillage for security against these depredators.

The present year of extraordinary drouth has furnished some interesting lessons on the difference between the effects of good and bad management. The potato crop, for example, has varied five hundred per cent with the treatment it has met with. When it has been planted *early*, in a soil, not made rich hastily with fresh, badly mixed manure, but by previous high tillage, with an addition of well pulverized compost, we have succeeded in raising large and fine roots. Late planted, and on poor soil, the crop has in many instances been insufficient to pay the digging. The Irishman who dug our crop, said he was quite as well rewarded for his labor by taking *one* bushel in *ten*, as in taking the *whole* of his own scanty product. The *oat* crop is another which has exhibited in a striking light, the advantages of being *up to the time.* Crops which were sown closely after the disappearance of frost, have afforded a fair return; while some which we have had occasion to notice that were put in but two or three weeks later, reminded us of such as were fit only to cut with scissors and rake with a pocket-comb—they could not, in fact, be craddled.

But we need not multiply instances. If the essential requisites of good tillage are attended to, such as heavy clover sod, muck and sod compost, and early sowing for *wheat;* high manuring, thorough intermixture, and clean tillage for *corn;* fertility, sufficient depth, and early planting for *potatoes;* and thorough underdraining, subsoiling or trench plowing, to prevent wetness at one time, and loss from drouth at another, with such other requisites as good management always points out; if these all should have place in the practice of our farmers, we should hear much less complaint of the ravages of depredators and the calamities of seasons.

Does Manuring always Pay?

This is a question which seems to be agitated by a great many of our agricultural brethren, with whom we have lately conversed. Perhaps the reduction which the agents of the Peruvian Government in this country have quite recently made in the price of guano, may have given *fresh* importance to this question, and made it assume of late a more prominent place in conversation. Previous to this late reduction in price, or when it was above $50 per ton, the impression seemed to be very general among farmers that they could not afford to buy, or, in other words, that manuring with *that* would *not* pay. A similar impression prevails, we should judge from their conversation, in the minds of many in regard to all marketable manures. They do not purchase—they do not try, for they have got the persuasion pretty firmly fixed in their minds that using these advertised fertilizers will not pay, that is, that their crops will not be increased thereby in sufficient quantity to remunerate them for their outlaid money. A similar impression seems to be very common in regard to home-made manures which require some considerable time or labor in their production. Many seem to have doubts about their ever getting remunerated for their time and pains in getting up some kind of protection to their manure-heaps against exposure to sun and rains, or in throwing up a compost heap; and many more are incredulous about ever getting paid were they to go to work and manufacture their own poudrette, or save the urine on their premises, converting it into a dry manure by having it absorbed by muck or other material. Few seem to think that it would pay to be at the little labor necessary to save the manure of their hen-roosts or poultry-yards, which is just about as valuable as guano from abroad. Whole neighborhoods, perhaps whole towns, may be heard of, in which no other manure seems ever to have been used save that which is to be found at stable-doors or in cattle-yards, after it has been well leached by rains, and had all the valuable gases and fertilizing matter extracted and exhaled from it by exposure to the rays of a burning sun.

These fears, doubts and incredulities, about manures and manuring not paying, are the products, we fear, more of laziness and want of enterprise than of well-authenticated facts, and of just inferences therefrom. They seem to us to be baseless—without any foundation in fact or reason. And not only so, but like a great many other errors and mis-judgments, they are the sources of a great deal of loss and mischief. Were these doubts and erroneous impressions removed, there might be an addition to the crops of the whole country, of ten or even twenty per cent. If this estimate is not exaggerated, then these erroneous impressions cause to individuals and to the community generally *an immense loss*. To remove them is, therefore, an object of no small importance. The products of the soil and of the farm generally, would thereby be much increased. The wants of society would be more abundantly supplied, and comforts be more easily procurable. Let these errors, then, be attacked wherever they exist. Let the facts and the truths to which they are opposed be well established and brought out so as to secure attention and candid consideration.

As a small contribution towards this important object, we would at present, lay before the reader a few facts which seem to warrant us in expecting that *manuring will always pay*, when good judgment presides over the whole operation;—and that farmers would be much nearer the truth at all events, in expecting that manuring will always, or nearly always, pay, than in indulging such fears and foolish notions as those to which we have alluded at the commencement of this article.

The almost universal opinion among our best and most enterprising farmers, that guano will cause an increase of products which will not only pay cost, at $50 per ton or $2.50 per 100 lbs. as it has lately been sold at, and for the time and labor in applying it, but will also furnish a considerable net profit besides—this general opinion among those who have tried it, both in Great Britain and America, may be fairly adduced as very good proof that manuring *will* pay, even when the article used costs a high price, and is often adulterated or deteriorated in quality. We have known and read of instances in which guano was used injudiciously, and therefore without any remunerating increase of crop, but the general result has been such as to compensate abundantly for the outlay of money, time and labor in applying it. The benefits of guano are now so well established and so generally known, that the demand is almost incredible. But for the statement made by Dr. JAMES HIGGINS, the chemist of the Maryland Agricultural Society, who lives near the great importers of guano, Barreda & Bro., we should have been slow to believe that the demand in the United States has ever amounted to 200,000 tons, in one year. Dr. Higgins, in a letter to the *Washington Union*, says however, that he has learned from a most reliable source, that the quantity of guano which will be brought to the United States this year will be about the quantity above named. The recent reduction which these importers have made in the price will probably increase the demand of next year to 250,000 tons. This at their lowest price, $50 per ton, will amount to $12,500,000. If the agricultural products of the country can be increased to such an extent by guano as to make a remunerating return for an outlay of ten or twelve and a half millions of dollars, surely it would pay to be at more expense than we now are to save the fertilizing elements of crops which now so generally go to waste, both in cities and villages, and also about individual homesteads, stables and barnyards.

As it is principally in regard to manures *made on the farm*, that we wish to persuade our brethren that it *will pay*, to make and use them, we will now give an instance of the fertilizing effects of a home-made manure. A farmer in Piermont, N. H., was led by some remarks in the Patent Office Report for 1851, pp. 380, 381, to make some experiments with a fertilizer composed of urine, plaster and ashes. The composition was made by saturating with urine 325 lbs. of ground plaster, 3½ bushels of house ashes and about four bushels of common sand, and this he calls Urate. When sufficiently dry, this was sown broadcast over half an acre of land intended for corn, and thoroughly harrowed in. About a spoonful was also put into each hill at the time of planting. The crop of corn was not great owing to poverty of soil, &c., but it was as good as was anticipated, and the corn throughout the whole season exhibited a luxuriant green and apparent healthiness, uncommon for so small a growth. He thinks it would be of greater utility on more fertile soils.

The effect of applying this *urate* on a potato crop was more gratifying. One part of the potato patch was manured with about half a shovelful of good manure to each hill, and on another part the urate was used at the rate of about a heaped table-spoonful to each hill. The yield of that part treated with urate exceeded that of the manured land by several pounds in a row of 75 or 80 hills. Some rows of fifty-four hills were planted without any manure, and these fell short by 62 lbs. of the quantity yielded by rows of the same length treated with urate. In other words, the urate *more than doubled* the crop.

If any reader should wish to pursue a farther investigation of the question, 'Will manuring pay,' we would refer him to several articles in *Country Gent. and Cult.* for 1853, and particularly to the accurate experiments of Dr. Keene, C. G. II., 321, and Cult. 202, and to 'Interesting Experiments with Manures' by H. H. Eastman.

The Great Hay Crop.

[We yield to the request of the writer of the following communication in reference to that 'almost incredible' hay crop, which has been noticed in our issues of Sept. 14th and 21st. In a letter accompanying his communication the writer of it says—"I believe that nothing conduces more to stimulate the enterprise and industry of individual members of the farming community than the persuasion that greater things have been accomplished by others than they themselves have as yet been able to bring to pass. I believe it would be a great stimulus to enterprise, if some of the more ambitious or successful of the agricultural brotherhood could accomplish results far beyond anything as yet realized--something that would startle and astonish and make the rank and file cry out "Ridiculous," "Humbug," "Impossible." After a while the wonderful result would become a fixed fact, and then there would be a prevailing opinion, among those who had hitherto been contented with old ways and ordinary products, that *verily* there are possibilities of improvement and attainment far beyond what they had ever dreamed of. It is on account of such considerations,—on account of the stimulus which would result to urge farmers on to improvements and enterprises yet unattempted by them, that I would most respectfully but *urgently* entreat you to lay before your readers all that is authentic and reliable in regard to this 'great hay crop.' Your unwillingness to countenance belief in it, I can readily understand and sympathize with; but surely, while it is not absolutely impossible, and since there is so much to make it plausible, you would not shut your columns to any article which would explain or render less marvelous a startling statement. Please favor us with something on Irrigation of meadows in Lombardy."]

Messrs. Editors—The surprising crop of hay which was reported in your paper of Sept. 14th, and of which you stated in your next week's issue that you did not wish to be considered as countenancing any belief, has proved a stumbling block to many, both in this country and in G. Britain. The gentleman who first gave this statement to the public has recently communicated to the London Times some remarks in explanation and confirmation of this almost incredible hay crop. The substance of these remarks which we now propose, with your permission, to lay before your readers, may serve to present the matter in such an aspect as may render the original statement a great deal less incredible than at first sight it appears, and may also furnish to the enterprising portion of your readers some hints which may serve to increase their crops both of hay and other produce by the adoption of some modification of the means employed in the case of the great hay crop, at present under notice.

Mr. James Caird who first announced to the public the fact that twenty tons of hay, or grass which would have made as much as that in dry hay, says that at the late agricultural meeting at Tiptree, the farm of Mr. Mechi, the latter gentleman directed the attention of his visitors principally to his liquid manure system, which was in fact the most interesting feature of Mr. M.'s farm this season. His Italian rye grass was the only unsuccessful crop; but he referred to the experience of others with whom it had been more successful. He told his audience of the marvellous results obtained by Mr. Kennedy, in Ayrshire, whose Italian ryegrass affords keeping at the rate of 70 house-fed sheep to an acre. Mr. Telfer, of Ayr, who was present, confirmed this statement from his own experience, he having got from three cuttings of this prolific grass in one season, as much green food as would have made twenty tons of hay per acre. It was no wonder that many were startled by such statements, seeing that this is *ten* times the number of sheep and *ten* times the quantity of hay usually fed on, and got from an acre. Men cried "Impossible;" they *could* not believe it. It would be impossible without a great amount of moisture. And there is the difference of 10 inches in the rainfall of the east and west of Great Britain in favor of the west, on which side this great crop was produced. An inch of rain is equivalent to 100 tons of water to an acre; so that on an average, nature gives to the western farmer 1,000 tons more of water per acre than to his eastern competitor. In the growth of grass it is all needed. In addition, Messrs. Kennedy and Telfer, who grew the large crops in question, apply *liquid* manure early in the mornings, and late in the evenings. The mechanical labor, even when aided by machinery, of applying 1,000 tons of water to an acre of land, must ever present a serious obstacle to the farmer of the eastern districts; and even should he do this he would then be only on the level whence the western farmer starts.

Mr. Caird then proceeds to some details which tend to make such large crops of grass or hay less incredible. A good crop of meadow hay, it is well known, weighs about two tons. Now a stalk of Italian rye-grass is twice the length of one of meadow-grass. If the stalks stand equally thick on the ground, the Italian rye-grass will thus weigh twice as much as the meadow-grass. But if there are two stalks of Italian rye-grass for one of meadow-grass the crop of the former will be four times the weight of the latter. Those who have seen the crops of the gentleman referred to need not to be assured that both of these conditions are fulfilled; and, as Mr. C. says, it needs but the repeated application of liquid manure to this rapidly growing grass, in a favorable climate, to secure three such cuttings in the season as Mr. Telfer affirmed he had got. Many farmers, because they have never seen it themselves, would deny many of the great things accomplished by their more enterprising and pains-taking agricultural brethren, and would say, before it became established and notorious, that it is "impossible" on any land to grow superb crops year after year without manure—to have beans, wheat, mangold, potato, cabbages, oats and swedes following each other in any succession (provided the land is kept clean,) each crop most luxuriant, all carried off the ground, and not a particle of manure applied. And yet, says Mr. C., this may be seen in half an hour's ride from London by the North Kent Railway, on the drained portion of a large marsh. When guano was first introduced, many deemed it "*impossible*" that a brown powder brought thousands of miles across the ocean, would prove a hundred times more valuable for the growth of crops than an equal weight of good farmyard manure. Mr. Caird concludes his remarks by observing that "one of the most serious obstacles to agricultural improvement is to be found in the limited standard which some agricultural teachers have set up as the *fixed* boundary of agricultural progress." There is no presumption so great he says, as that which glibly cries "impossible," in an age which has produced the electric telegraph.

If these considerations be duly weighed, together with some well established facts in regard to the results of irrigation in Lombardy and elsewhere, we think the incredibility of 'the great hay crop' will be considerably diminished. Obs.

Damp Houses.

Messrs. Editors—There is an almost universal complaint in the spring of the year, by persons occupying brick and stone houses, that their houses sweat so abundantly as to cause great injury and inconvenience. A true knowledge of the *cause* and the nature of the evil, however, will enable us to remedy the evil. The universal impression is, that the damp and moisture which have been accumulating in the walls, flow out upon their surface on the first mild days of spring. This view, however, is erroneous, and leads to false conclusions as to the healthiness or unhealthiness of certain houses. The truth is that the walls, during the winter months, have become frozen, or in other words have accumulated a large amount of cold; on the first genial days of spring, the warm air, laden with an additional quantity of moisture, (for the capacity of the air for moisture increases according to its temperature,) comes in contact with the cold walls and deposits a portion of its moisture upon the walls. The cold walls diminish the temperature of the warm and heavily-laden atmosphere which comes in contact with them, thus rendering it incapable of holding in solution its previous volume of water, which consequently is deposited upon the walls.

To prove and illustrate this position, I need only to refer to an occurrence with which all are acquainted. Fill with *cold* water a glass or silver or other pitcher, incapable of the transmission of water, and place it in a room on a warm day, and you will instantly see the outer surface covered with drops and streams of water. Here the water cools the vessel, and the vessel lowers the temperature of the air brought in contact with it, necessarily causing a deposition of the surplus moisture. In the case of both the walls and the vessel, this operation goes on with like results until these materials attain the same temperature as the circumjacent atmosphere.

How then shall we remedy the difficulty? Simply by keeping our houses closed during this period as much as possible; thus preventing the admission of the external air, overburthened with moisture, until the walls have become warmed by more genial atmosphere, to the same temperature as the air itself. In proof of this position, you have but to examine any room or cupboard or closet, into which the external air has not been admitted during one of these *giving* periods of spring. We seldom have more than one of these periods of sweating in the year, unless a hard freezing supervenes to cause a subsequent accumulation of frost in the walls. By this simple remedy may your paper be kept uninjured and adhesive to the walls—the furniture from undue expansion, and paint and varnish from injury.

From this view of the case, you will of course perceive that the amount of moisture settling on the walls, is no index of the dampness of the house, and consequently of its unhealthiness. From this misconception, brick and stone houses have been condemned as being too wet; but with a knowledge of the true source or cause of moisture upon the walls, during the first few warm spring days, I cannot, after long experience, discover that they are any colder or damper than other material. In order however to render the temperature of my house as equal as possible, and to cut off the access of any moisture from rain or other causes from the outside, I have built a house with hollow walls, thus interposing a space of four inches of atmospheric air between the interior and exterior walls, the air being a complete non-conductor of heat or moisture. This interposed air should be entirely isolated. In addition however, it is good economy, on the score of preservation of the materials as well as of health, to paint the house on the exterior, giving it a waterproof coat, and to extend the roof some two or three feet beyond the side and end walls in order to intercept the rain which would otherwise be blown into the walls. G. E. H. *Brownsville, Pa.*

Cattle Show at Northampton.

Mr. Tucker—The annual Cattle Show and Fair of the Hampshire, Hampden and Franklin Society, was held in Northampton on Wednesday and Thursday of last week. It gave evidence of increased interest in all that relates to the well-being of the Agricultural community. The show of cattle was larger and finer than usual, and the same may be said of the exhibition in other departments. Among the bulls we noticed the splendid animal owned by Paoli Lathrop, Esq., the President of the Society. This bull whose name is Kirkleavington, we understand is descended from some of the late Mr. Bates' choicest Duchess stock, and appears to be worthy of his parentage. A fine bull of the Hereford breed attracted much attention. Judging from some specimens of working oxen and other stock of the same breed, we should think them well worthy the attention of breeders in Massachusetts and the other New England states. They are large and fine, and one would suppose from their general similarity might be more easily matched than some other breeds for working oxen.

The first day of the show was devoted to the exhibition of cattle, the drawing match and the plowing match. The second was occupied with the show of horses, the address before the Society and the dinner. The horses were out in good number and quality. Mr. Sumner of Heathe, exhibited a fine Morgan stallion. He is a well proportioned animal, and is remarkable for great strength and ease of movement. His sire was the Old Green Mountain Morgan, so we understand. Mr. Johnson of your city was expected to deliver the address, but was detained by illness at New-Haven. He however arrived before the dinner hour had expired, and entertained the numerous company of ladies and gentlemen at the tables for a half hour or more, with a most interesting account of some of his doings at the World's Fair in London, interspersed with many anecdotes illustrating the ignorance and prejudice of some of the English people and the fairness and generosity of others.

In the absence of Mr. Johnson, Prof. Nash of Amherst, occupied the hour in giving to the farmers some of the results of his observations made during his late tour in Europe. His subject was British Agriculture what in it is to be avoided and what practiced. Like most of his productions the address was marked by good judgment and sound common sense, while the manner of presenting his subject was clear and discriminating.

In the department of mechanics the most interesting contribution was made by Fisk Russell of Boston, who exhibited his Mowing Machine. The executive committee were so much interested in it that they proposed to Mr. Russell to make trial of it with Ketchum's Mower. He consented, and the next day the trial was made in the presence of a numerous company. He was completely successful. His one horse machine with a cutting blade of three feet, worked apparently quite as easy as Ketchum's two horse one with a cutting blade of about four and a half feet. It cuts closer, and is more simple in construction than Ketchum's. It will start in grass without first giving motion to the knives, and running upon two wheels it can be easily transported without loading into a wagon. Farmers in this vicinity are beginning to try mowing by horse power, but are almost discouraged by the fact that breakages are so common with them. Hitherto it has too often been the case that if a man goes out mowing with a machine in the morning, it is matter of dread uncertainty with him whether he mows one acre or five before noon. This is all wrong, and unless manufacturers contrive to lessen the strain on the crank machines, or make them of much better material, they will sell but few in this vicinity.

The importance of giving a better education to farmers as a class, is becoming quite a common topic in the addresses delivered at our annual Fairs, and I think the good effects of these alone can hardly be over estimated. The truth is that hitherto as a class, they have had no rallying point. They have almost nothing of that *esprit de corps* which belongs to other professions, and as this business naturally confines them for the most of the time within the bounds of the farm, they miss most of those opportunities of improvement which are possessed by those who live in cities or thickly settled towns. They have seldom an opportunity of hearing themselves addressed as a distinct body, and their duties clearly pointed out. Our agricultural papers do this to some extent, but they lack the unction of the living voice, and besides they reach but few of the mass of the farmers. Hence the value of fairs which call the farmers together, not only to exhibit the fruits of their labor and skill, but also to listen to counsels, warning and reproof. If only heeded, they cannot fail, in course of a few years, to elevate the standard of the profession, and make it more nearly what it ought to be. It is indeed strange enough, that while three years at least of special preparation are required of the student of theology, medicine or law, before he can *begin* to work, a common school education, and that often a very ordinary one, is thought amply sufficient for him who is to be but a farmer. Rev. Mr. Clift, of Stonnington, Ct., who delivered the address before the Hampshire Co. Society a few days since, spoke very forcibly on the subject of Scientific Agriculture. He looks to this as the grand means of renovation in some of our old townships, now in an evidently decaying state, through the loss of some of its most enterprising sons and daughters who seek in other pursuits for that position in society to which they feel themselves entitled, but which they despair of obtaining on the old homestead. He argued that if each of these towns contained but two or three farmers of the right stamp—men who honored their calling, and were an honor to it—the aspect of things would very soon be changed, and thrift and enterprize would take the place of stagnation and decay. In furtherance of this subject, he recommended the Ag. Societies to offer as a premium for success in certain departments of husbandry, the privilege of free attendance at a course of agricultural lectures at some one of the institutions now open for that purpose. I thought the suggestion a good one, and worthy of particular consideration.

I fear I am exceeding reasonable limits, but cannot close without expressing the hope that you will continue to make the *Country Gentleman* what I have heard it declared to be on pretty good authority—the best agricultural paper in the Union. E. N. N.

The Peculiar Property of Wheat.

The peculiar property of wheat which distinguishes it from all other cereals, is the large proportion of gluten which it contains, the predominance of which renders it so much better adapted to the human constitution, as food, than any other vegetable production. The late Sir Humphrey Davy speaks of gluten as one of the most nutritious of all vegetable substances; and, in fact, wheaten flour is more or less valuable to the baker, the housekeeper, and the consumer, just in proportion to the quantity of gluten it contains, which varies considerably in different kinds and qualities of wheat. This difference is produced by the various conditions of soil, climate, and manure; and it is a question of no small importance, both to producer and consumer, what proportions and modifications of these elements are most favorable to the production of gluten in the largest proportions.

The influence of climate may be first noticed, as being, probably, as great as that of either soil or manure. Wheat may be cultivated in the northern hemisphere from the equator to the verge of the arctic circle. Within this range, the zone lying between the 30th and 60th degrees of latitude, produces the most mellow and easily-manufactured wheat. Southward of this belt, the grain becomes large, ricey, thin-skinned and dry; whilst northward, the berry gradually grows smaller, and the bran or skin thicker, rendering it of inferior value in commerce. Bakers, who find that that flour spends the farthest which contains most gluten, give the preference to Spanish, Egyptian and African wheats; but owing to the color being yellowish they have to mix it with English and American in small proportions. The proportion of gluten in wheat from different parts of the United States seems to be about 23 to 24, the amount of starch, sugar, gum and water being 76 to 77.

To determine the influence of different kinds of manures on the production of gluten, some experiment were made, the result of which is given by Boussingault. The manures were applied to the same soil and the same seed, and the results were as follows, showing a range of from 12 to 35 per cent:—

	Gluten.	Starch.	Bran and soluble matter.
1. Human urine,..........	35.1	39.3	25.6
2. Bullock's blood,.........	34.2	41.3	25.5
3. Night soil,...............	33.1	41.4	25.5
4. Sheep's dung,..........	32.9	42.8	24.3
5. Goat's do.	32.9	42.4	24.7
6. Horse's do.	13.7	61.6	24.7
7. Pigeon's do.	12.2	63.2	24.6
8. Cow's do	12.0	62.3	25.7
9. No manure,............	9.2	66.7	24.1

From these experiments it appears that some wheats must be much more useful than others to the baker and the consumer of bread; whilst other kinds raised with different manures, must be much more useful to the manufacturer of starch. The battle, it would appear, was between the gluten and the starch, there being little more than one per cent. difference in the other components. But, whilst one kind of manure produced gluten and starch in nearly equal quantities, 35.1 and 39.3, the amount of starch is about five times greater than that of gluten with some other manures, and when no manure was used the proportion of starch was more than seven times that of gluten, or 9.2 of gluten to 66.7 of starch.

Stowell Evergreen Corn.

This corn is I think, the most profitable of any other variety that is grown in the northern or middle states, for fodder, when cut green. I found it an excellent fodder in September, when pasture was pretty much burnt up with the hot sun. It will turn out a third more fodder to an acre than any other kind on account of the large number of leaves that it produces.

I prepare my ground as follows: Take a lot that has lain to grass three years—plow late in the fall—say first or middle of November. In the spring apply 30 loads of barn-yard manure to the acre; then cross-plow and harrow it thoroughly. Then furrow out 2½ ft. apart. Sow 3 bushels to the acre. As soon as it is up, apply plaster and ashes; then plow and hoe it nicely. In a couple of weeks, go through again with the plow.

I find that the corn makes excellent feed for hogs, when fed before it gets hard and dry. A. D.

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Fence Posts.—The *Hereford Times* mentions a farmer who took up a fence after it had been standing fourteen years, and found some of the posts nearly sound, and others rotted off at the bottom. Looking for the cause, he discovered that the posts which had been inverted from the way they grew were solid, and those which had been set as they grew were rotted off. This is certainly an incident worthy of being noted by our farmers.—*Mark Lane Express.*

Sheep and Pigs for the South.—S. W. Jewett, Esq., of Middlebury, Vt., has recently shipped a splendid French Merino ram, to J. W. Watts, Esq., of Cartersville, Georgia, and a pair of his Portugese or "Webster" pigs, to J. V. Jones, Esq., of Birdsville in the same state.

On the Practical Value of the Analyses of Plants.

S. W. JOHNSON.

In a former paper* I have endeavored to discuss impartially the value of soil-analyses. This question was considered in reference to the assumed principle, that as the qualitative (ash) analysis of a plant furnishes directly a correct notion of what must exist in the soil in order to grow the plant,—*so the quantitative analysis of a plant is a guide in adding the needful substances in proper quantity and proportion.* I now propose to lay before your readers certain statements which seem to prove that the principle in italics is itself incorrect, and that the analyses of plants *as hitherto interpreted*, to American farmers, are of little practical value, and indeed have been made the basis of false doctrine. In making and sustaining this assertion, nothing is said derogatory to science or to its genuine cultivators. What is incorrect does not belong to science, although that which is only partially true, must often be provisionally accepted by scientific men, until they can discover and reject its errors.

Nothing was more natural than to conclude from the analysis of the ashes of a plant, that silica, phosphoric acid, and the other constantly present mineral ingredients, must occur in the soil which is destined to nourish that plant. This conclusion has been so fully and decidedly confirmed, that it must be accepted as a "fixed fact." A closely related deduction was drawn from comparing the analyses of different crops. It was said that the grains contain much phosphoric acid, root-crops much potash and soda, grasses much lime and silica. It was therefore inferred that these crops need especially, to their luxurious growth, that the substances respectively mentioned, be largely present in the soil. At first a great error was committed by comparing the analyses of single parts of one plant, with the whole of another, instead of bringing the complete plant into account in all instances. Thus in case of wheat, only the ripe grain—in that of grass, the whole of the plant except the root,—while with the turnip only the root was brought into the comparison. It is perfectly obvious that the root, stalk and leaves of wheat must attain a normal development before the grain can be formed, and unless the leaves of the turnip manifest by size and color a healthy condition, it cannot be expected that the root will grow. The plant is in an agricultural sense, an individual, all of whose parts are necessary to each other and to the whole; consequently, considerations deduced from a study of a part must have a doubtful value. At first, too, analyses were directly compared as they came from the chemist's note book, expressed in per cents. In wheat, for example, was found 50 per cent. phosphoric acid, and 20 potash—in turnips, 7 per cent. of the former, and 45 of the latter. This seemed to leave no doubt that phosphates were of the greatest importance to the wheat crop, while potash must be an indispensable application to turnips. When, however, we calculate the phosphoric acid removed from an acre, we find that more is contained in 25 tons of turnips, than in 25 bushels of wheat. It then became fashionable to analyze the plant more completely, and to calculate how much it would remove from the soil, and recipes were given to replace the missing quantities. The illustrious **Liebig** went so far as to cause the manufacture of special manures on a large scale. But the discordant results of analysis ought then to have given a new direction to study. We often find, in comparing different analyses of the same kind of plant, differences of 10 and even 20 per cent. in some ingredients. We know in fact, that we can influence the composition of the ash to a considerable extent, by direct application to the soil. The structure of the plant is such as admits the moisture of the soil to pass up constantly through its roots and stem. Whatever is in the soil, soluble in water, must also take the same route, whether it be just what the plant needs, both in quality and quantity, or more. Any excess of water entering the plant, evaporates again from the leaves, but the salts that were dissolved in the water, remain in the tissues of the plant, where they may often be seen by aid of the microscope in beautiful crystals. It is impossible now to say how much of these substances is just sufficient for this plant, though we know that it will fail to develop itself if there be a want of these, and will be injured by too great an excess. There is doubtless a considerable space between the two limits—a space within which the variations may be harmless. It is then plain that *the composition of the ash of a plant is, to a certain extent, accidental.* It is only from a great number of analyses, that we can derive an average that shall represent the normal composition of the ashes of a plant.

It is now assumed by the best authorities, as the result of the most reliable investigations, that phosphoric acid, silica, lime, magnesia and potash, are the most essential ingredients of cultivated crops. Chlorine, soda, sulphuric acid, iron and manganese, though doubtless essential at least to some parts of plants, nevertheless are subject to the greatest variations, and in most cases are needful only in very small quantity.

I copy here a table drawn up by **Wolff**, from the most recent analyses, (the older ones were very erroneous in some points) which gives an average, of the quantity of the more important bodies removed from a hectare of land in a good yield of the ordinary crops. The weights and measures of the original are retained, as the value of the numbers is chiefly comparative. 1 hectare = 2.47 acres—1 kilogramme = 22.8 lbs.

[*For Table, see top of 1st column on next page.*]

In comparing these numbers, it is seen that the quantity of nitrogen is nearly alike in all the cereals, and in meadow hay—while the quantity contained in the produce of a hectare of beans, peas, beats, potatoes and clover, is double so much. The amount of phosphoric acid does not vary very greatly throughout, if we except beans and beets, in which it is above, and meadow hay in which it falls below the average. We

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* See Cult. for 1854, p. 233.

Table, showing the amount of the more important substances removed from the soil by crops.

		Yield per hectare in kilogrammes.	Nitrogen—kil.	Ash—kil.	Phosphoric acid kil.	Potash—kil.	Lime and Magnesia—kil.	Silica—kil.
Wheat, .	grain, .	2000	36.8	35.0	16.9	10.5	6.0	0.5
	straw, .	5000	15 0	255.0	9 2	42.1	12.4	158.6
		7000	51 8	260.0	26.1	52.6	18.4	159.1
Rye, . . .	grain, .	1600	30.6	27.7	13 1	9.3	4.0	0.6
	straw, .	3800	13.3	152.0	4.0	29.6	10.0	101.1
		5400	43.9	179.7	17.1	38.9	14.0	101.7
Barley, .	grain, .	2300	39.3	63.3	21.8	13.2	5.4	18.4
	straw, .	4000	12.6	180.0	7.2	47.2	16.2	96.3
		6300	51.3	243.3	29.0	60.4	21.6	114.7
Oats, . . .	grain, .	2000	37.4	70.0	17 5	11.2	7.7	29.4
	straw, .	4000	12.0	240.0	7.7	62.8	24.0	130.0
		6000	49.4	310.0	25.2	74.0	31.7	159.4
Hog Beans, .	grain .	2000	82 2	63.8	21 8	28.7	8.7	0.4
	straw, .	3000	36 0	150.0	15.0	36.0	54.0	15.0
		5000	118.2	213.8	36.8	64.7	62.7	15.4
Peas, . . .	grain, .	1500	53.1	37.7	11.4	16.6	6.0	0.6
	straw, .	3000	53.7	150.0	11.3	40.5	54.0	6.0
		4500	106.8	187.7	22.7	57.1	60.0	6.6
Beets, . .	roots, .	40000	96.0	384.0	23.0	172 6	43 8	21.5
	tops, . .	10000	28.0	188.0	12.2	75.2	30.1	13.2
		50000	124.0	572.0	35.2	247.8	73.9	34.7
Potatoes, ...		20000	82.0	204.0	23.1	105.1	14.7	11.4
Clover hay, ...		6000	139.8	390.0	24.6	105.7	120.9	20.7
Meadow hay, ...		4000	53.2	24.64	13.3	57.9	61.9	77.6

find five times as much potash in a crop of beets as in the cereals, and the quantity is high in case of potatoes and meadow hay; lime is very large in clover, and silica is abundant in the cereals, especially in the straw and chaff.

Now we perceive that practice has taught some facts which this table does not account for. Is it not true that we can reap two good crops of oats from a given soil where we can one of wheat? yet how closely the composition of the two plants agree. Again every body knows that a fair crop of rye can be obtained from a soil where wheat would not pay the expenses of cultivation, yet the table reveals no correspondingly great differences. Compare wheat and clover. The latter contains as much of every ingredient except silica, and indeed 2½ times more nitrogen, 2 times more potash and 6 times more lime and magnesia than the former. We should expect them to be able to grow at least two crops of wheat to one of clover; but we can easier remove three crops of clover than one of wheat.

It may be objected that these are unfair statements, because soda, chlorine, sulphuric acid, &c., are not taken into account. But it must be remembered that these bodies are almost always present in every tolerable soil; in fact buckwheat, white clover, and spurry, that grow on the poorest soil, contain a larger percentage of these bodies than any of the grains.

It is obvious then, that chemical analyses alone cannot guide to a profitable mode of culture, cannot inform us what kind and amount of manure is wanted on a given soil, in order to produce a given plant, or series of plants to the best advantage. In the first place, analysis cannot serve as a practical guide in learning the nature of the soil; and secondly, if it could do this, it cannot enable us to adapt the soil to the wants of the plant.

Not alone the chemistry, but also the physiology and anatomy of the plant must be studied, would we arrive at safe conclusions.

Each species of plant must be separately investigated; deductions drawn from observations and experiments upon one kind of plant, do not necessarily hold true of others.

The causes why plants manifest so different relations to the soil, may be some or all of the following:

1. Although it may be said with sufficient truth, that all the mineral food of the plant is derived from the soil, and though some plants flourish well when they are obliged to acquire all their organic nutriment from the atmosphere; yet most of our cultivated crops are greatly benefited at certain stages of growth, by finding stores of organic food in the soil. In fact, we may say that such stores are necessary to the successful cultivation of some crops.

2. Extent of leaves and roots. Those plants whose leaf-surface is small, and whose roots are few and short, must gather their nourishment from a smaller and more easily exhausted space, than such as have these organs largely developed.

3. It is well known that much difference exists in the structure of the stomata or pores through which leaves and roots absorb their food. This cannot be without influence on the rapidity and luxuriance of their growth.

4. Water is the vehicle which carries into plants all the food that they receive from the soil; therefore the structure of the plant, in so far as it affects the absorption and evaporation of water, is of influence on the other conditions of its growth.

5. It is true that much more of certain organic substances is needed to develop some crops, (ammonia in case of wheat) than the mature crop contains. It is possible that the same occurs with some mineral ingredients.

The natural history, the chemistry, in short the whole science of each agricultural plant, must be made the subject of careful investigation. The knowledge of the general conditions of vegetable growth has arrived at a pretty high state of culture—we must henceforth seek to learn those special conditions which determine the utmost development of individual species. Science and Practice, the laboratory and the farm, have this business to perform together. Every plant can be put into such circumstances as will make it tell what it needs for its successful growth.

Within a few years the right path has been struck, and already some advancement has been made, and I may shortly find opportunity to communicate to your readers, some details concerning the production of certain crops, some deductions from the numerous experiments which have been carried out in Europe, and especially in Great Britain, during the last ten years.

I trust that in this and a preceding article, I have written nothing to discourage Agricultural Education, or destroy the farmer's confidence in science. If any one promulgates false doctrine in the name of science, he will be found out in time. Truth remains, and has a permanent value, no matter who defends or opposes it.

My object has been to define the limits within which chemical analysis cannot be practically applied. I desire to give chemistry all the credit it deserves, and and have too much regard for that beautiful science, to bring upon it future contempt, by loading it with present adulation. S. W. JOHNSON.

Munich, Bavaria, Oct. 6, 1854.

Home-made Manures.

There have lately appeared in this paper some rather urgent appeals to farmers on the subject of saving and manufacturing their own manures, instead of sending off money to Peru, or giving it to some boasting, though perhaps dishonest, manufacturer of this or the other chemical fertilizer. One of the considerations by which such appeals may be or are usually enforced is this, that farmers in saving their own manures would not only be practicing economy or saving money, but also be preserving themselves from the loss and annoyance arising from purchasing adulterated articles. Such fraudulent articles are getting to be very abundant. Even respectable dealers, who mean to keep and sell only good articles, occasionally get imposed upon. These important truths, which it is so much for the interest of all farmers duly to consider, have been impressed upon our minds with fresh force, in consequence of the knowledge of a fraud in fertilizers, on a most extensive scale, having been lately brought to our knowledge. From the Transactions of the Highland and Agricultural Society of Scotland, we learn that a Mr. G. W. Hay of Roxburghshire, being desirous of trying experiments with various manures, put himself in communication with a dealer or dealers in "agricultural manures." Among the substances to be employed by Mr. Hay were superphosphate of lime, nitrate of soda, phosphate of soda, sulphate of potash, phosphate of magnesia, sulphate of ammonia, and muriate of ammonia. When the parcels of chemicals furnished by the respectable people of whom they were bought, came to be examined, the nitrate of soda was found to contain only 56 lbs. of that substance in every 100 lbs.; the phosphate of soda only 6 lbs. in the 100 lbs.; the sulphate of potash 60 lbs.; the sulphate of ammonia not quite 9¾ lbs; the nitrate of potash (saltpetre of commerce) about 11½ lbs.; the phosphate of magnesia 2¾ lbs.(!!); and the muriate of ammonia 54 lbs. only. As to the superphosphate of lime, as it was called, it contained only 4 per cent. of soluble phosphate of lime; the other 96 lbs. consisting of water, gypsum, siliceous matter, some kind of free acid, and insoluble phosphate of lime, a perfectly useless substance.

When Mr. Hay ventured to complain of the fraud thus practiced upon him, he was coolly informed by the dealers that they could not think of taking their rubbish back. They stated that what he had bought of them was "*the usual quality for agricultural purposes*," and contained "the quantities suitable for plants." That is to say, in the opinion of the dealers the quantity which is *suitable for plants* is 2¾ lbs. in every hundred of phosphate of magnesia, 9¾ lbs. of sulphate of ammonia, 4 lbs. of superphosphate of lime, and 6 lbs. of phosphate of soda. This insolent answer is pretty good proof that some, perhaps most, dealers in "agricultural manures" take it for granted that the agricultural community are easily imposed upon, and may be cheated and fleeced to almost any extent.

By every case of detection and exposure of such frauds, farmers will be more and more persuaded of the expediency of manufacturing their fertilizing substances, as much as possible, at home. They will turn their attention more and more to saving, and putting into available or useable forms, all the urine and excrements upon their premises; to saving their barnyard manure from the wasting influences of exposure to winds and rains and sun; to composting; and to the manufacture of chemical manures under their own eye. That this latter can be done to some extent is evident from the directions given in the last volume of *The Country Gentleman* in regard to the composition and domestic manufacture of what is known in Great Britain by the name of 'Economical Manure.' By every case of exposure of such frauds, the number will be diminished of those who purchase annually various quantities of guano, superphosphate of lime, poudrette, &c., while the guano of their own hens and all the animal excretions on the premises are allowed to go entirely to waste.

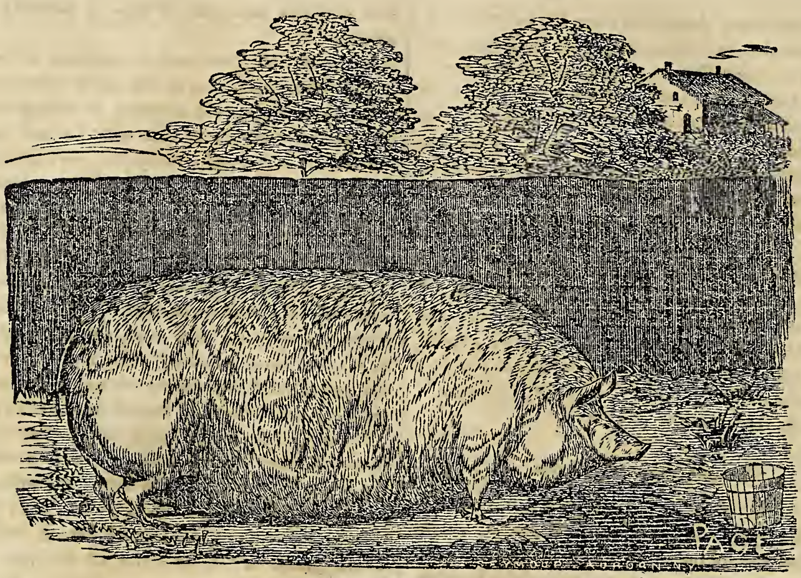
To Destroy Liveforever.

MESSRS. EDITORS—I notice in your paper a reward of ten dollars, offered by Mr. H. Stone of Warren, for a receipt that will effectually destroy Liveforever.

I will give you, for the information of Mr. Stone and your readers generally, the result of my experience in the destruction of this worst of all herbs.

I had in my meadow some ¾ of an acre, completely covered with it. In the autumn of 1852, I commenced by plowing as shallow as possible, or not more than 4 in. deep, laying the furrow as flat as possible so that it could be easily removed. I then carted and packed the turf in heaps about 6 ft. wide, 4 ft. high, and as long as was convenient, say about 4 rods, handling it carefully so as not to scatter the small fibres. I used salt and lime freely during the packing operation.

In this way I have completely removed it from the soil, and I find on opening the heaps that the inside is completely destroyed, and suitable for top dressing or mixing again with the soil. I do not offer this communication wishing or expecting one cent for the information, but simply as the result of my experience, and if of service to any one, they are entirely welcome. S. D. GOODWIN. *Bloomfield, Oct.* 16, 1854.



A Suffolk Pig.

Luther Tucker, Esq.—I with this send you a type of a Suffolk Sow I had from the J. C. Jackson importation. I slaughtered her at twenty-two months old. I took her from her second litter of pigs, when they were six week's old, Nov. 20th. On the 27th of the next March, I slaughtered her.

Her live weight was,	450 lbs.
Her carcass and loose fat weighed a fraction over 400 lbs. say,	400
Loss.	50

Auburn, N. Y. April 20, 1854. J. M. Sherwood.

[The above though dated six months since, only reached us last week.]

The Health and Comfort of Horses Sacrificed.

This is a thing which may be seen almost every day. The ways in which it is done are manifold. The health and comfort of man's noble servant are sacrificed in the stable, on the road, and also when tied up without shelter from cold and wind, while his master is cozily enjoying himself by a warm fireside. The feelings of every one who has any compassion in the constitution of his nature, must often be pained by sights which so often come before him of the comfort of the noble horse so horribly neglected, and heedlessly sacrificed.

One of the ways in which this is done, is probably little considered. Many owners of horses, probably, shut them up in a close, unventilated and perhaps dark stable, without its once occurring to them that they are thus injuring the health and destroying the comfort of their animals. The stench and pungency which meet one on opening the stable-door in the morning, might make some think of this matter who do not seem to. If they were shut up a night or a few hours in their own stable, perhaps then they might. A horse cannot breathe the atmosphere of many stables without injury to his eyes, and especially to his lungs or respiratory organs. As this is the season when horses are being stabled, pasturing being about over, it would be well for many horses and for their owners too, if they would see that their stables are provided with means of ventilation and that every source of pungent and foul smells, be removed as early and as effectually as possible.

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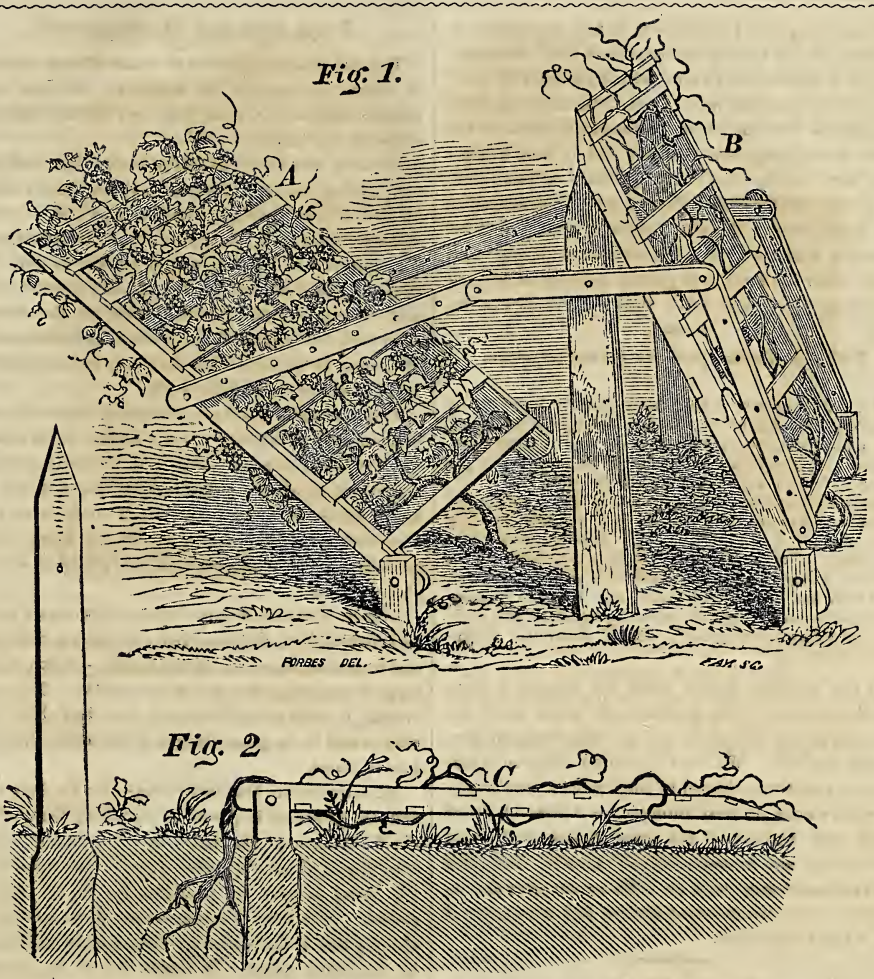
Farming in California.—The *Alta California*, speaking of farming in that state, says "there is no branch of business considered at a lower ebb in this country at present than farming. It is the general impression that every one engaged in this occupation is driving a ruinous business. It is scarcely reasonable to suppose that it would be otherwise, when it is borne in mind that wheat is not selling at one half the price it brings in New-York, while labor on this side of the continent is three or four times as high. The native richness of our soil makes up, however, in some instances, for this discrepancy. In conversation yesterday with a farmer from Alameda County, on the bay, about ten miles south of Oakland, he informed us that he had found his crop this year quite profitable. His land is a very choice selection. He had 76 acres of oats, which yielded 7,200 bushels, or about 95 bushels to the acre; 23 acres of wheat, which yielded 1,800 bushels or about 78 bushels to the acre; 25 acres of barley yielding 1,500 bushels, or 60 bushels to the acre; and 53 acres of potatoes, 17 of which had been dug, producing 2,600 sacks of 130 lb. each, or nearly 20,000 lbs. to the acre."



CROSS' PATENT ADJUSTABLE GRAPE FRAME.

Cross' Patent Grape-Frame.

In the Country Gentleman for Nov. 2., we gave some description of an adjustable grape frame recently patented by Mr. S. O. Cross of Sandy Hill. We have since been furnished with a cut representing it, which is given above. By reference to our former notice, the reader will have no difficulty in understanding its purposes, and will at once see how valuable it may be in affording conveniences for sheltering the vine from winter frosts, exposing the fruit to the sun, &c. Fig. 1, is a perspective view, and Fig. 2, is a vertical section, showing how the frame can be lowered to the ground for any desirable purpose. Frame A, represents a view of grapes grown whilst the frame rested against the posts, and now partially depressed, exposing the fruit to the sun, and bringing the foliage underneath. Frame B, shows how the vine is secured within it. C, represents the frame as the inventor designs leaving it until the grapes get their growth. He says in a letter, that "the elasticity of the vine is sufficient to protect it from injury in bending, and when the frame is properly arranged it does not draw on the vine to operate it." His claim is for an "Adjustable Elevating and Depressing Grape Frame," with, or without supporters, attached and made of any known material. It therefore embraces a variety of modifications not represented in the above.

The New Curculio Remedy.

Messrs. Editors—I would ask you how soon we may look for the report of the committee, on Mr. Matthews' remedy for the curculio's depredations on the Plum tree? I have seven or eight fine plum trees, and cannot get so many plums in a season, although the trees blow full and the fruit sets well. If he has found out a remedy against the attacks of the plum weevil, so that we can be sure to save our plums, if made known to the public, or to every person who will apply for it, I will be willing to contribute my mite for a knowledge of it. A Subscriber. *West Bridgewater, Mass.*

We have many inquiries of this kind. It is perhaps no more than due to the public, and to the Associations who have appointed committees to test the remedy in question, to say that those committees have concluded to give it another year's trial, although *some* of them felt fully prepared to report now. The members of the committees have no liberty at present to speak of the mode of applying this remedy, and it may be that they were not expected to divulge their opinions as to its merits. In the mean time we would recommend to our correspondent the old, excellent, and well tried remedies combined, of the confinement of pigs and geese under the trees, and jarring down on sheets and destroying the insects while laying their eggs in the fruit.

Foliage Destroyed by Grasshoppers.

For three seasons I have been greatly troubled by grasshoppers, and the present season greatly damaged. My fruit trees, young shade trees, and evergreens—indeed shrubbery, vines and every thing else in my grounds, have been ruined by the grasshoppers.

Before I commenced transplanting again, I thought I would ascertain if there was any remedy for this evil; if not, I would surrender and make no farther effort to improve and beautify my grounds, but if there is, I shall continue my efforts to grow shade, and fruit trees and ornamental shrubbery. Will the "Country Gentleman" enlighten me with regard to this matter, and oblige a subscriber? Jno. P. Dobyns. *Maysville, Kentucky.*

In the Northern States, there are seasons of occasional occurrence, when grasshoppers prove quite destructive to the foliage of *young* fruit trees, in particular localities. We have known an instance where a nurseryman was obliged to employ boys continually for some weeks, to pass through his blocks of dwarf pears, and frighten off the grasshoppers, or else lose their foliage and consequently their growth. But these are rare occurrences with us. We cannot give the information our correspondent desires, and hope some of our readers may do so.

Garden Walks.

Desirous of making my garden walks hard and firm, especially some few that are sloping and apt to wash away in winter, I made use of tar as recommended in one of the late nos. of your paper, but without the wished for success. It is now three weeks since I applied it to the sandy walks in my garden, but it does not harden. I have tried boiled and cold gas tar, but without the desired effect either on sand or gravel. I want my garden walks as hard as stone. Please tell me how they can be made so by tar? Austin J. Roberts. *Lakeville, Mass.*

Not having had occasion to construct inclined walks, we are not familiar with the details, and would therefore request information from some one who has had practical experience. We have only witnessed the entirely successful results in the few cases that have come under our personal observation, and are unable to say how long a period of time is usually required to render hard and firm the composition made use of. If the tar was good, we have no doubt the walks will get ultimately harder, even in case the process may be retarded perhaps by too small a proportion of sand with the gravel, which we think an essential ingredient.

Facts from the Horticulturist.

The last number contains as usual a rich collection of interesting facts on the subject of fruit and ornamental culture—a few of which we extract and condense for our pages.

Budded Roses.—The editor states that last summer, during the dry and warm weather, many varieties on their own roots dropped their foliage; while on the *Manetti* stock they not only continued fresh and green, but remained in blossom nearly all the season. We may add that Ellwanger & Barry showed us the past season very fine plants budded on the Manetti even with the surface of the ground, and subsequently set deeper in the soil—thus obviating in a mearure the usual objections to budded roses.

The Concord Grape.—The report on the character and merits of this grape is very similar in its views to those we have already given. Its great superiority in *size* is not mentioned. The editor thinks it only *two weeks* earlier than the Isabella. If so, it must ripen very nearly with the Diana, which for three seasons past, has matured with us about that period in advance of the former.

Large Winter Nelis Pears.—Specimens are acknowledged from Adrian, Mich., measuring over eight and a quarter inches in circumference—which is very large for this high flavored winter variety. These specimens, ripened about Christmas, into the richest juiciness, would be in great danger of throwing the editor into raptures.

Exaggerated Descriptions.—An English horticultural periodical is quoted as describing the new rose, the "*Duchess of Norfolk*," as a "*brilliant colored climbing Hybrid Perpetual rose*"—the term *climbing* being merely an exaggeration of its vigorous growth. This kind of exaggeration is, we believe, not entirely new with English gardeners, more particularly in describing colors. It ought not to be tolerated among horticulturists, whose language should be as pure and truthful as the beautiful forms they cultivate. Falsehood and elegant roses make a bad mixture—and we might with equal propriety describe the Bartlett pear as a foot long, and the Winkfield as so productive that two hundred bushels are usually produced per tree the third year.

Astonishing Transmutation.—We copy the following entire, and commend it as an interesting addition to the cabinet of facts iu the possession of the advocates of transmutation:—

A gentleman in this county presented us with two Apples, taken, he says from the same limb of the same tree, which had never been grafted or budded, one a russet like *Pomme gris*, and the other a large green apple. We of course set this down as a mistake. But, what was our surprise, on receiving a letter from a gentleman in Jamaica, L. I., (whom we visited during the time of holding the State Fair, and who showed us, tmong other things, a large patch of beets, from which he offered to supply us,) containing the following announcement: "On examining my Beets I found that some of them had turned to Sweet Potatoes, and therefore send you along a barrel, which I hope you will receive in good order." This is the greatest transmuation we ever heard of, and hope it will continue.

The Housewife.

FRIED APPLES.

Who does not like fried apples? We all like apples in a raw state, or when they are baked, or stewed; and it cannot be denied that they furnish one of the most wholesome and agreeable kinds of diet. Although apples raw, stewed, or baked, may be pronounced *excellent* and *delicious*, still, there are many kinds, when fried, which are *super-excellent*:—and they, who seldom meet with a dish of *fried* apples, often wonder why they are not *always* fried, instead of baked. When apples are baked, they often burst open, and much of the best part of them flows out as juice, and is lost. But when they are fried, the whole is saved; and "it is a dainty dish." In those regions where potatoes are few and poor, on account of the rot, fried apples are an excellent substitute. A dish of fried apples is quickly prepared for the table, which is often a consideration of no small importance. Wash them—cut them in two—take out the stem, core and calyx, and, unpealed, put them into a tin pan with butter, or the gravy of baked pork, with some water, in proportion to the quantity to be fried—cover them with a lid—set them on the stove—stir them occasionally, until they become soft—and be careful not to *burn* them. Romanites, which are often almost worthless, baked or raw, "disappear with good gusto when fried." We may truthfully pronounce despisable Penics, when fried, *good;* but the Porters, Bellflowers, Tallman sweets, and a long list which we might name, when fried, are really a luxury. Sour apples do not fry well—they fry to pieces too much. NON EPICURUS.

CORN HUSK BEDS.

A correspondent of the Germantown Telegraph describes his method of making these beds, as follows:

As soon as my corn is stripped from the husks, I select the finer and more flexible ones, and dry them in the shade. As soon as all moisture is expelled, the hard ends, or those nearest the buts of the cob, are cut off, and the remainder drawn through an instrument purposely constructed for the business, and which divides them into numerous narrow strips. This is all that is necessary; the material is now ready to be put into the bed, and in point of cleanliness, durability and elasticity, will be found greatly superior to straw, stripped hazel, or, indeed, any article that can be used. In Spain and Portugal, and indeed in many other countries, the materials used for beds, are of the most healthy character. In the former country, feather beds are rarely seen, and the same remark applies with almost equal correctness, to Portugal. In both of these countries, the husks of corn are almost invariably used as a substitute for feathers. They are prepared and sold in the markets by the peasantry, and for a price merely nominal. I have known "under-beds" of this description to last ten years. They are almost wholly exempt from that terrible annoyance to chambermaids—DUST, and, indeed, from dirt of all kinds. Straw, even of the best sort, will last but a short time. It chaffs, is liable to permeate the closest tick, and requires frequent replenishing, which is always a disagreeable job. Besides, husk beds are much cooler than any others. If the ends of the husks are cut off carefully, and the stripping properly performed, so that all the strips will be of nearly equal width, one will repose as comfortably upon a husk bed, especially on a hot night, as upon those of feathers. Their elasticity is retained for a long time, and if well shaken up when the bed is made, you have the luxury of a new bed every night.

LARD.

The following remarks, which we find in the *Dollar Newspaper*, contain some good suggestions, but the writer is mistaken as to the "great-grandfather" part of the business, for it is absolutely necessary to keep the rough lard hot for several hours, or else a large portion of it will remain behind. If taken off the fire as soon as it appears to be melted, at least two-thirds of the lard will remain unseparated. It is true there is nothing in the whole routine of housekeeping that requires more attention, in keeping the lard at the melting point without burning:

I find in the "Newspaper," of late, several communications in regard to curing hams. This is all very well, but not one has given us a hint in respect to "frying out lard." To a farmer's family this is certainly an important item, and I propose to give your readers practical experience on this point. When the fat is over the fire, it requires all attention. In this section, some still hold on to the opinions of their great grandfathers, and believe in the old practice of boiling the lard for hours; yes, a whole day before it can be in a proper state to put away. This is a mistaken idea. All that is necessary is to put the fat in thick iron pots; let it simmer over the fire, and as soon as melted, skim the lard off, and put it in tin pots. By adopting this plan, much time and labor is saved, the lard is sweet, white and good, and can be kept for years. B. F. B. *New Castle Co., Delaware*, 1853.

ECONOMY IN WASHING.

Since the disagreeable rite celebrated as "washing day" cannot be dispensed with altogether, we remember to have promised some instructions to young housekeepers overlooking the ceremony for the first time.

The first grand requisite is plenty of good river or rain water; when it is necessary that hard water should be substituted, some simple chemical process can be used successfully to lighten the labor. If soda is chosen, the less quantity that will suffice the better. This should be dissolved by pouring boiling water over it before it is put in the tub; it will not answer so well thrown in in lumps. The soap should not be too new, or it will waste. The bars should be cut in pieces as soon as brought home, and so exposed to the air.

We give a recipe for preparing suds, recommended by good authority: To every eight gallons of water add an ounce and a half of yellow soap cut small, one ounce of soda, and one pint of lime-water. The clothes should be laid to soak in cold water some hours, then put on with the "suds" cold; let them come to boil slowly, and boil half an hour. Take them out, examine each article carefully, and rub with soap where necessary. Washing "Peggies" or "Jennies" are very destructive things, and nothing but rubbing, with judgment will clean some clothes.

Those who are not so anxious to save themselves trouble, will find it better to soap with good yellow soap and warm water, and rub them once, or twice, or thrice as they are more or less soiled. Boil them well for half an hour, and rinse in blueing water.—The best laundresses prefer hard water rinsings.

Flannels and colored clothes shall have a separate consideration.—*Ger. Tel.*

CURE FOR BONE FELONS.

My practice with bone-felons, is to direct a poultice of bread and milk, flaxseed, or slippery elm, for a few days, perhaps five, and then make a deep and free incision to let the matter out. When this practice has been followed, I have never seen any loss of bone or stiffened fingers; on the contrary, where timely opening has been neglected one or the other of these casualties has frequently resulted.—*American Ag.*

Seedling Potato.

Messrs. Editors—Accompanying this note, you will receive a few potatoes,—raised from seed by myself. As you will perceive, they resemble in color and general appearance the Carter, a seedling from which variety,—grown in the near vicinity of the Mercer,—it is. Its edible quality, is fully equal to that of its parents, and its character as a yielder is far better than that of either of them, being in this particular *better* than any white variety with which I am acquainted. Its history I will give you as briefly as possible.

Seven years ago last spring I sowed forty seeds, all from the same parentage; in the autumn, I saved the produce of those which gave promise of being superior; this culling left me twenty-five varieties for further experiments. In the succeeding spring I selected such of those as had kept well, and were free from disease. I continued this course each season, selecting such *only*, as were of superior edible character, as well as great yielders, and free from disease. This severe test left me *three* years since but this one variety which I shall call the Wendell Potato. I have cultivated it since,—in order to try it fully, in juxtaposition to the Mercer, Pinkeye, Yam, June, Merino, and a few others, and it has proved itself a far more prolific variety than either of them—except the last, which you are aware is red in color and of inferior character, and has never shown the least indication of disease, even during the season of 1853, when every one of the other varieties were seriously affected by it. I am thus particular in giving you the whole history of this seedling, not only because I am convinced that it is a valuable acquisition, but because I feel a little vain of my success. Yours very truly, Herman Wendell, M. D. *Albany, October* 30*th.*

P. S. I shall place in the care of R. H. Pease—successor to Emory & Co.—of this city, a few of the potatoes for sale, from whom they may be obtained by those wishing to give it a trial.

Carrots and Deep Plowing.

Mr. Tucker—I have a piece of land that inclines gently to the south, the soil sandy loam, with a trace of clay. Last year melons were grown on it. About the 20th of last May, I gave it a generous top dressing of hen manure; then plowed it a foot deep, then another application of the same fertilizer, after which it was reduced to fine tilth by the harrow and garden rake. Carrot seed was then drilled in, in rows 10 to 12 inches apart, and the weeding afterwards faithfully attended to. The variety was the Orange, which is the best I am acquainted with. The product was 1375 bushels to the acre. We attribute our unusual crop, first, to abundant manuring—second, to deep plowing—third, to the compactness of the rows, there being nearly two rows where cultivators usually make but one. The dryness of the season did not affect the plants in the least, in our opinion, nor in our judgment will it ever injure any crop but slightly when the earth is effectually stirred a foot or more in depth. We have a few acres of slightly heavy, and slightly damp ground, on which we should like to plant potatoes another season. We do not know what variety of this root will be most likely to prosper on such a soil, but have thought that perhaps some of your readers could advise us. C. Smith. *East Hamburg, Erie Co., Oct. 29th,* 1854.

Massachusetts Hort. Society.

This Society, so long holding the highest rank of any Hort. Society in the country, seems of late to have fallen under evil influences from some quarter. Among other things, a charge of a very disreputable character was made last spring, against one of its members, on the authority of a report of a special committee, and a very severe censure passed on the offending member. It would seem, however, that the charges made by the special committee, were not true—at least it is stated in a Boston paper, that at one of its recent meetings "E. S. Rand, Esq., the Chairman of the Committee appointed for that object, offered a preamble and resolution, the former denying the statements made by the Select Committee, May 26th last, and the latter *rescinding* the same from the records, together with the vote of censure passed on Mr. C. M. Hovey at the same meeting. The meeting was one of the largest ever held at the rooms, and the vote unanimous." This is but a lame apology to one whose good name has been traduced in the horticultural circles of this country and Europe, for we perceive that the *Gardener's Chronicle* and other foreign horticultural publications, have republished the charges and the vote of censure, as a specimen "of the Yankee variety of the class of mercenary prize hunters." We hope Prof. Lindley and others who have copied the charge, will note the refutation.

YELLOW LEGGED DORKINGS.

Our correspondent, Alla Du Pays, in a letter published some weeks since, asked us whether Dorkings with yellow legs were to be visited with outlawry from the lists of pure blooded Five-toes, or whether she might still cherish them as true and loyal heirs to her favor. We thereupon searched the authorities who roost along our bookshelves, and found one say one thing and one another, and the most part nothing at all on the mooted point. So we gallantly referred judgment to the Editor (whom, by the way, we believe to be an *Editress*) of the London *Poultry Chronicle.* Our oracle has mounted the sacred tripod and, August 30th, thus held discourse:

> We are much flattered that our opinion stands so high among our transatlantic brethren, and we are very sorry our first verdict must dispel an illusion. However the golden color mentioned may rejoice the eyes of a "digger," or be sought in California or Australia, when found on the continuations of a Dorking fowl, it is to our mind an unmistakable proof of a *faux pas.* We do not accuse the present inhabitants of our fair querist's yard with being the actual culprits, as it is notorious that the effect of a *mesalliance* that took place years ago may only now show itself. We regret we cannot grant a dispensation for this Malvolio-like fancy or propensity."

We bow before the verdict and are willing to admit its justice. To our mind, though, the *Poultry Chronicle* should be glad, and not "very sorry," to "dispel an illusion" on any point in which it finds its weaker brethren in the fog. Will Alla Du Pays accept the judgment, or will she plead its reversal?

Answers to Inquiries.

GRASS-SEED HARROWS.—(*A Subscriber*, Elliott, Maine.) Brush harrows are very imperfect, and constantly liable to get out of good working condition, by clogging and matting together. Generally speaking, however, we have no substitute for them for harrowing in grass seed. There is no doubt that harrows made in the ordinary way, but with much smaller and more numerous teeth would answer an excellent purpose, and far exceed in perfection of work, any brush harrow. We would make the following as a suggestion, which we have never tried, and for which we shall charge nothing for the patent-right. Procure pieces of inch and a half or two inch plank, four or five feet long, and about a foot wide, of hard elm or any other firm wood, hard to split. Drive through these at regular distances, large-sized *cut nails;* perhaps 12 or 20d. nails would be of suitable size. Let them be driven in as far as the head, so as to project a few inches on the other side. Now let several of these spiked pieces of plank be hinged together, and the instrument is completed. A harrow is formed with small teeth, as numerous as may be desired; and it is evident that a single passage of this harrow over on ordinary plowed field would give it a surface as fine and as mellow as that of the most finished onion-bed; and that if the surface has been previously levelled by harrowing, grass-seed may be raked in by means of this instrument in the most even and perfect manner, to a depth which may be regulated by the size of the nails used in its construction.

As very few soils are perfectly free from grass roots and stones, it will be necessary, in order to prevent clogging, that the nails should be driven *obliquely*, so as to *point backwards*. This will enable them to mount any obstruction readily, and to clear themselves with facility from any matter tending to clog them.

A strong recommendation of this plan is its *cheapness*. Fifty cents in all for plank, nails, and hinges, with a few hours work, would propably complete the whole.

We hope some of our readers will try this plan and give us the results; at the same time we intend to give it a fair trial, and report. There is no doubt that a contrivance, similar to this, at least in its intention if not in its details, would prove of great value for many purposes besides seeding with grass, among which we may mention the harrowing of wheat-fields early in spring, preparing onion-beds, mellowing the soil for drilling in the seeds of root crops, &c

MANAGEMENT OF BOGS AND PEAT.—1. I wish to know what is the best course to take with a peat bog, to reclaim it after thorough draining—it is covered with moss and small roots from two to four inches deep.

2. What is the best substance or substances to mix with peat or muck to make a compost for a clay soil.

3. Will it benefit the crop to spread muck without its being composted, on the sward, and turn it over for corn. N. JENKS. *Barnston*, *Sept.* 26, 1854.

The first great requisite in reclaiming a bog, is thorough and complete underdraining—this gives full command to the operator. The next is to seed it with timothy, red top, or clover, or a mixture of all these, as the case may admit. The drier and firmer kinds of bogs only will admit of a good and certain growth of clover, unless an application of lime, ashes, or marl, is given. It may be well however to mix a portion of clover seed in all cases, and give it a fair chance Timothy scarcely ever fails, on a well drained bog, with a properly prepared surface.

If moss and small roots interfere with plowing, they should be collected into heaps, and either drawn off, or burned when dry enough, at some time when there is enough of moisture in the peat to prevent its taking fire.

One-third of stable manure, and perhaps a little ashes, will form the best compost with peat, applying each in their successive layers, so as to give a thorough intermixture of the parts. On light soils, a large proportion of turf and loam will be beneficial.

Generally, the soil is not much benefitted, immediately, by the application of peat only—in a few instances, we have observed it very considerably so. It is however, a manure that remains several years in the soil, which should be taken into the account.

STABLING COWS.—In looking over the columns of a recent number of the COUNTRY GENTLEMAN, I notice an inquiry to prevent cows from lying in their manure when in the stable. The remedy is very simple. It is by having a gutter drop immediately behind the cows, 6 inches deep and 16 inches wide. If cows are fastened with yokes, they need about 4 ft. 9 in. to stand upon. By having the stalls long enough you have a walk back of the drop, which is convenient for walking on, setting pails, &c. I have a drop in my steer stable nearly like the above plan, and they keep almost as clean as cows. A CONSTANT READER.

Mediterranean Wheat—Selection of Seed, &c.

Remarks somewhat of an opposite character, by various contributors have appeared in the columns of the "*Country Gentleman*" of latter time, in regard to Mediterranean wheat. One of your correspondents, "F. D. C." condemns it so far as to say, that "if you cannot by good culture and early sowing, raise white wheat, then give up its cultivation for the present at least." I have raised both white and red wheat, and would recommend to your readers who have been *unsuccessful* in raising the former, to give the Mediterranean a fair trial. A number of years since, through the kindness of a friend, I obtained some two or three bushels of the best Genesee white, that could be procured, and for a time was much pleased with its produce—the yield was good for a year or two, and the flour made from it, of the best quality. It however soon depreciated; the fly made sad havoc with it, which, together with the rust, sometimes reduced the crop about one half.

I was then induced to get of a neighbor who had raised it successfully, a few bushels of Mediterranean wheat. The result was, on that part of the field where it was grown, I had about eight bushels more per acre than on the part where the white grew. At that time there was a prejudice against it—some condemning it, and saying, that the flour made from it, was little better than rye. It is now fully acclimated and such complaints are rarely heard, though it must be admitted it is not *altogether* proof, against either *fly* or *rust*, and I never found any wheat that was. From what I have got out this season, I think I am safe in estimating the yield from 20 acres at 500 bushels. This, at present prices, is better than raising no wheat at all.

My practice is to plant a field with corn two years in succession, planting on the inverted sod the first year—the second year I manure the ground heavily in the spring from the barn-yard, turning it under well, and after passing a heavy roller over it, it is without further preparation marked out and planted. This manuring sometimes serves for both the corn and the wheat crop: but last season, I had enough left over to serve as a light dressing for about *half* the ground; the remainder had about 175 lbs of guano mixed with plaster, to the acre. There was very little difference perceptible at harvest, and I thought the money expended for guano was not lost on the wheat crop alone, and I incline to think the grass will derive some benefit from it.

Farming as I do, with wheat after corn, and generally a *part* of the field after potatoes, I am apt to be a little behind in seeding, and even here I find an advantage in Mediterranean wheat, as on trial I have found it to do better sown late, than any variety I have ever tried, either white or red. I mostly sow timothy seed soon after sowing (or I should say drills ing, for all my wheat for a few years past has been put in with a drill which has pretty generally taken the place of other modes hereaway,) and clover early in the spring following. In this way I generally succeed in having my fields well seeded with grass. There is one remark of your correspondent, that with your permission, (though with no view of engaging in controversy) I will not pass over unnoticed. Speaking of the wheat above mentioned, he says,—"It is more liable to smut, rust and chess, which grows more natural with it, than with any other." As regards *smut*, I have never been troubled with that—as to *chess*, it will grow *natural* with any wheat that contains it; and, give it fair play, overpower it too, in due time. It is however the proper business of the husbandman not to admit any such intruder, and the only safe plan is, to sow wheat perfectly clean. If this course is adhered to, the chess, as a matter of course, will soon disappear. I once heard a man complain, who had sold his wheat,that he had been *docked* in the price on its delivery, on account of the *cockle!* I believe the latter has never been prized as an article for bread, whatever may have been its value in former times when *large wigs* and *powdered wigs* were both in fashion. The sooner a farmer makes up his mind not to sow or drill in with his wheat, either cockle or chess, the better for all parties.

The cause of *rust* is perhaps not very well understood. The season seems to have something to do with it—the kind of weather when the wheat is about coming to maturity—the kind of manure used, heavy fogs, &c. are all thought to have an influence. It is rare I believe, that wheat that has had a good dressing of leached ashes, has been injured with the rust, and I think it is more apt to escape where barn-yard manure has not been *directly* applied to it, but to the crop that has *preceded* it, either of corn or potatoes, provided it has been put in sufficiently early, as late sown wheat is much more liable to rust than early sown.

After a trial of some ten or twelve years, I have generally succeeded so well with the Mediterranean wheat, that I feel cautious of making a change, except in a small way, or as an experiment, nor would I advise any one under the *same circumstances*, to substitute it for a good variety of white wheat. But whatever variety may be used, too much care cannot be taken, to have it perfectly *clean*. It is considered among good farmers not only necessary to have a good *variety* of corn, adapted to the soil and climate, but also to *select* the best *ears* of that variety for planting, and that an improvement may be made in *that* way. If a similar plan was pursued in regard to seed wheat, an advantage would probably result, although the process might seem to be rather a tedious one. There is however one plan within the reach of all, at a trifling expense either of money or time. By means of a hand-riddle of the proper size, all the small shrivelled, and imperfect grains can be taken out of a few bushels of wheat, together with the chess, cockle, &c. with very little labor or loss of time (for it may be done at a time of leisure,) and this wheat appropriated for seed. A small quantity in this way would furnish seed for the next year, and if this plan was followed up for a few years by our farmers generally, there would probably be a manifest improvement in the quality of the wheat grown, and the controversy about wheat *turning to chess*, would soon come to an end and be put at rest. We never have any complaint about wheat turning to rye, and yet if both are raised on the same farm they are very apt to get together, and in some instances it has been hard to tell which was intended to be raised. If our winters were not rather severe for the oat crop, the wheat would also have to contend against that.

In conclusion I would say that probably four-fifths of all the wheat grown in this county (Salem, N. J.) at the present time, is Mediterranean; at least I was informed that of the two to three hundred thousand bushels bought and sold yearly by one dealer, that was about the proportion. This shows how it is estimated in some sections of the country, however low it may stand in others. C. W. *10th month 30th*, 1854.

The Cow Cherry again.—Our friends in New Scotland keep us apprised of the amount of butter produced by the cow Cherry, owned by Miss Brice. She had a calf on the 28th Sept., and from her milk in 28 days (Oct. 2 to 28) was made 46½ lbs. of good butter, which was sold in this city at 2s. 4d. = $13.29.

Notes for the Month.

☞ *We ask the particular attention of all our readers, to the first article in this paper.*

THE OHIO STATE FAIR.—We learn from last week's despatches from Newark, that the exhibition of stock at the Ohio State Fair, was very large and exceedingly fine—the animals showing none of the bad effects expected from the drouth; that the exhibition of short-horned cattle predominated largely over other descriptions, and that this part of the exhibition was said to be finer than at any previous Fair in that State The swine, poultry, &c., were numerous and of excellent quality. Their stalls and pens extended for more than a mile and a quarter, encircling the grounds, and they were nearly all filled. Some of the horses are also said to have been very handsome. The attendance seems to have been very good, the weather glorious, and every thing to have gone off to the satisfaction of all, except some who had been inconvenienced by the detention of freights.

THE NEW ENGLAND HORSE SHOW, at Brattleboro, seems to have met with reasonable success. Entries are stated to have been about 150 in number, and to have included some animals of great value. The matches were quite exciting; the time, both of single and matched horses, fair; and the attendance liberal. On Friday several miscellaneous matches were made, and a trial of ladies for the prize of a gold watch offered for the most skillful equestrianship, came off with *eclat.*

☞ We see by the last number of the London *Gardener's Chronicle*, that Mr. THOMAS' recent work —" Farm Implements, and the Principles of their Construction and Use "—has been republished in London with all its illustrations.

☞ We are indebted to Mr. QUINBY, author of a book explaining the " Mysteries of Bee-Keeping,'' for a box of very excellent honey. We learn that he owns in part or wholly about 400 swarms of bees, and has sold within the last year nearly *four tons* of honey. He wishes us to state that his book, above mentioned, may be obtained of C. M. SAXTON, Agricultural Book Publisher, 152 Fulton Street, New-York, or of the author, M. QUINBY, Palatine Church, N. Y.

SEEDLING POTATOES.—We have received from Dr. WENDELL, a basket of the Wendell Seedling Potato, described by him in another page of this paper. They are certainly of a very good quality for the table, and with the character for hardiness and productiveness which Dr. W. gives them, must prove a desirable addition to our list of good potatoes.

BUCKS CO. (PA.) FAIR.—We have received from some friend, the Bucks Co. Intelligencer, containing a full account of the exhibition of the Bucks Co. Ag. Society, from which we learn that the stock of horses, cattle, grain, vegetables, household products, &c., were more abundant than on any former occasion, and that the Society have abundant reason for congratulation in the success of the exhibition. We give in another page a notice of the prize corn crop of WM. STAVELY, Esq. who it appears also received the first for wheat, on a field of Mediterranean wheat, consisting of twenty-two acres, oats stubble fallow, heavily manured, and plowed in during the month of August, plowed a second time about the middle of September, and drilled in at the rate of one-and-a-half bushels per acre, and which it was estimated by the committee would average thirty bushels per acre. The committee concur in opinion that the extraordinary success which Mr. Stavely met with the present season in growing corn, is in a great measure attributable to his mode of deep plowing.

STONE HILL POTATOES.—Mr. D. A. BULKELEY, Stone Hill Farm, Williamstown, Mass., will please accept our thanks for a barrel of his fine potatoes. In a note accompanying them, Mr. B. says—" I send you a barrel of Stone Hill Potatoes, as a sample of my crop of ten acres, that averaged over 200 bushels per acre —a good yield for so dry a season as we have just past. The oldest inhabitants in these parts, never knew it so dry, nor when every thing suffered as much as the present season. These potatoes are the only kind that have yielded a return for the labor bestowed upon the crop, and many have come to the point not to plant any other kind."

CROPS IN BRADFORD CO., PA.—Extract of a letter from a subscriber at Troy, Pa.—" Wheat is scarce and high—at present worth $2 a bushel. Rye is $1.06— Corn, 80 cents—Oats, 40 cents. Buckwheat was an entire failure. Potatoes half a crop. Grass excellent."

SOWING PLASTER ON WHEAT IN THE FALL.—One of our correspondents, Mr. D. A. BULKLEY of Williamstown, Mass., last spring recommended, very strongly, the sowing of gypsum or plaster of Paris, on wheat in the fall, at the rate of a bushel and a half to the acre, contending that it would bring the grain to maturity from ten to fifteen days earlier than if sown in the spring. Mr. D. S. MERICK, of Nunda, Livingston county, N. Y. writes to the *Rural New-Yorker*, that last fall he sowed two bushels of plaster per acre on part of a field of wheat, and on the other part which was considered the best land, he put nothing. The plaster part of the field gave 18 bushels while that which was not plastered produced only 10 bushels per acre. Mr. W. finds the fall, in all cases, the best time to sow plaster.

STOCK FOR THE WEST.—A correspondent at Middlebury, Vt., under date of Nov. 3, writes us as follows: " Charles S. Wright of Racine, (Wis.) left here this morning, with some fine Durham Cattle bought of Col. C. L. Smith and H. Plumley of Bristol—some Herefords of A. L. Bingham—ten brood mares and colts of the Eclipse, Hambletonian and Morgan Stock, bought of A. P. Skiff, Geo. Gale, S. W. Jewett, A. Dana, and C. Goodwin—also 44 French Merino Sheep of S. W. Jewett of Middlebury, Vt.—all of which purchase amounted to about $9,000. The enterprising farmers and stock breeders of Vermont are making a harvest, while Wisconsin will be none the poorer."

Stock for South America.—Mr. Jacob E. Spring of Buenos Ayres, recently bought of Soloman W. Jewett of Middlebury, Vermont, some Hereford, Durham and Devon Cattle, and French Merino Sheep, which were shipped by the way of Messrs. Larkin & Stackpole of Boston. Mr. Spring has 25,000 Sheep, many of them high grade Merinos. It costs about 6 cents per lb. to raise wool in Buenos Ayres.

Wind Power.—We think our correspondent "A. C." will find Halliday's Wind-mill to answer his purpose exactly. It is we believe, warranted "to adjust itself to every breeze;" and from what we saw of it at the State Fair, we are inclined to believe that it cannot fail to prove of great value in raising water.

Light Wanted.—Mr. Wight, editor of the *Prairie Farmer*, in his notes of a recent tour to the east, in the November no. of that paper, thus alludes, in speaking of his visit to the editorial fraternity at Rochester, to Prof. Mapes:

> I did see Mr. Harris, the practical and scientific editor of the Rural; and he seemed none the worse for his encounter with the man of Phosphates--editor Mapes. I learned by the by—not here, but in several other places—quite a number of things of this same Prof. Mapes, as he is called; the chief of which is that he is no more of a chemist than the next man; that is, that he is no otherwise such than one can become by reading. Now no one can be a chemist by reading, any more than one can be a shoemaker by reading how to make shoes. I had supposed that as he professed to prescribe for poor soils, he was an analyzer of soils; but I was assured that *he had never made an analysis of a soil in his life*; and is no more capable of doing so than a gimlet is of making an auger hole. I heard more good stories too of the large crops which he has had the credit of raising, during the last few years, which if true would put his success as a farmer on a par with his claims to be thought a chemist. In fact, it *is a fact*, that there are many people "down East," who think that *Professor* Mapes and *Professor* Comstock would do well to form a copartnership and go into business together. From what I can learn, as soon as the new doctrine of congenialities is fairly established by "the spirits" now having it in charge, this is likely to come to pass. If it does, we have much to hope from it, without doubt.

Will somebody enlighten us on this subject? We recently asked a gentleman who advertises himself "as a pupil of Prof. Mapes," and a "consulting agricultural chemist," if he had studied analytical chemistry in Prof. Mapes' laboratory, and were *not* surprised when he informed us that he knew nothing practically about analyzing soils and that Prof. Mapes had no laboratory; and yet Prof. M. professes to have made analyses of soils by the hundred, and claims the title of "Professor" and "L. L. D." We may add, as a farther reason why some light should be thrown upon this subject, that we have never met with a scientific man who placed any more confidence in Prof. Mapes' science than we do in his general statements. It is a matter of much practical importance to our farmers to know whether the pretensions of one who sets himself up as their instructor, are well-founded or not. If, as he asserts, he has really "made analyses of the soils of more than 100 farms, and advised modes of culture founded on such analyses, and in no instance without *increasing the profits of the farmer more than one-third*," he has done what *no other chemist* ever pretended to have accomplished, and the laurels now resting upon the brows of Liebig, Johnston, Norton and others, should be awarded to him. Will somebody enlighten us on the subject?

Seedling Potatoes.—Mr. Benj. Chase of Bemus Heights, Saratoga Co. has presented us some potatoes which he says were raised from the seed of the Western Red, by Jas. Shepherd of Saratoga. They are large, white with red eyes, white-fleshed, of good quality, and as hardy and more productive, according to Mr. Chase, than the Western Red.

New-York and Ohio Durhams.—Mr. Bateham, editor of the *Ohio Cultivator*, whom we had the pleasure of meeting at our State Fair, in speaking of the cattle on exhibition says—"In comparing the most approved Durham cattle at New-York with those at the Ohio show, we notice that the former are generally of a finer make, and smaller in bone and size than the latter; which is no doubt owing to the difference in taste and circumstances of the stock breeders and farmers of the two States. We have nowhere beheld more finished specimens of Short Horns than are some of the recent importations of New-York; but we think that those of Ohio and Kentucky will generally excel them in size and earliness of maturity, which are the best requisites for western feeders and drovers." Mr B. speaks of the general arrangements and managemen of the exhibition at New-York, as the best he has ever seen in this country.

Conn. Valley Farmer.—This very valuable monthly, heretofore published at Springfield, and edited by Prof. Nash, has been transferred by its proprietors to Prof. N. who will hereafter edit and publish it at Amherst. The late proprietors say that they have published it at a very considerable pecuniary loss. We trust, however, that its present editor and proprietor will meet with a better reward, for the Valley Farmer richly merits a liberal patronage.

$3,500 for a Bull.—The bull "Syrius," which received the premium at the recent Bourbon County Ky., Agricultural Fair, has been bought by Mr. R. A Alexander, of Woodford in that state at $3,500.

A Word about Fences.—One of the most crying evils existing among farmers, at least in some sections of the country, is poor fences, and especially partition fences, which are a fruitful source of hard feeling and contention between neighbors. It is quite a task for a portion of our farmers to support their fences, where fencing timber is scarce, and with small means. But there is often a lack of a fixed principle and a full determination of the parties, in coming up to their duty.

If they would seek to know and do their duty in this matter their slumbers would not be so often disturbed by their cattle and other stock. GEO. CARGILL.

SALE OF IMPORTED POULTRY.—The stock of poultry imported by Mr. GILES of Woodstock, Conn. and noticed recently in this paper, was sold at auction at Barnum's Musem, New-York, on Saturday last. The very rare birds sold at high prices, while on "the more common sort," says the Tribune, "there was a dead loss upon the cost in England, of about an average of 75 per cent." The pair of Mandarin Ducks, said to have cost 75 guineas (about $375) in England, sold for $150. Among the other sales were the following:

1 pair of white Swans,..	$100	1 pair of Call Ducks,....	$
1 white female Swan,...	50	1 Sheldrake Duck, ...	15
1 black female Swan,...	60	3 spoon-bill Ducks, ...	13
1 pair of black Swans...	99	1 pair of pin-tail Ducks,..	0
1 pr. Japanese Peacocks,	100	1 pair of Widgeon Ducks,	12
1 pair Barnacle Geese,..	40	1 pair of Widgeon Ducks,	7
3 hoop-bill Ducks,......	75	3 Widgeon Ducks, ...	9
1 pair Golden Pheasants,	18		

4 pair of English Pheasants, at $10, $11, $15 pr. pair.
3 male Golden Pheasants, at $5, 8,50, $12,50 each.
3 male Silver Pheasants, at $10, $10,50, $16 each.

The sales of Shanghais, and birds in that line, went off at what the owner called "sickly prices." The following indicates the prevailing rates:

1 pair of Gray Dorkings, $10; 3 do., $15; 6 Seabright Bantams, in two lots, $5 each; 2 do., hens, $2 each; 3 Golden do., $1.87 each; 3 English Bantams, $1.25 each; 3 do., $2.37 each; 4 Bramah Pootras, 1 cock and 3 hens, $2.50 each; 1 Poland hen, $1.25; 1 Bolton Gray hen, $1.25; 1 pair of Golden Hamburgs, $2 25; 1 pair of black Spanish fowls $10; 1 pair of do., $5.50; 2 Black Shanghai hens, $3.

TURKEYS—1 pair of beautiful white Turkeys, $5.

GEESE—2 pair of Barnacle Geese, $12 and $14; 2 pair of Egyptian Geese, $10 and $16.

STUMP MACHINE.—*J. H. C.* We doubt whether the machines alluded to (see Co. Gent. vol. 4, p. 215) are manufactured for sale. Can you not get one made from the description given?

PRIZE POULTRY.—Mr. GEO. ANDERSON, an extensive poultry raiser of this city, received, at the State Fair at New-York, the *first prizes* for the best White, Buff and Dominique Shanghais; and at the Albany Co. Fair, the same prizes for the best Black, White and Dominique Shanghais and White Dorkings.

DUTCHESS COUNTY AGRICULTURAL SOCIETY.—At the late meeting of this Society the following officers were elected for the ensuing year:

President—EDGAR THORNE, Poughkeepsie.

VICE PRESIDENTS.

Henry Rundall, Amenia.
E. Gazely. Clinton.
T. J. Van Wyck, E. Fishkill.
E. S. Barton, La Grange.
Orrin Wakeman, North East.
Isaac Akin, Pawling.
Wm. R. Kelley, Rhinebeck.
Wm. Abel, Union Vale.
Josiah Wheeler, Hyde Park.
W. E. Hackstun, Beekman.
Sam. L. Taber, Dover.
J. T. Brinkerhoff, Fishkill.
B. S. Thorne, Milan.
W. Velie, Pleasant Valley.
Col. S. Harris, Pine Plains.
Aaron Vail, Stanford.
J. H. DeForrest, Washington.
C. DuBois, Po'keepsie.

Treasurer—Geo. W. Coffin, Amenia.
Cecretary—Geo. W. Paine, Washington.
Cor. Secretary—Geo. Wilkinson, Poughkeepsie.

GOOD COWS.—Mr. JAMES CHILDS, of Deerfield, Mass., informs us that he has recently sold the two heifers, "Abby Folsom" and "Victoria," an account of whose product was published in this paper last spring, to Mr. ALFRED M. TREADWELL of Madison, N. J. Mr. C. says—"They are fine animals, and will be a valuable addition to his stock. From their milk 437¾ lbs. butter was made in six months from the time they came in."

ANDRE LE ROY'S NURSERIES
AT ANGERS, FRANCE.

ANDRE LE ROY begs to inform his numerous friends that he is now prepared to execute all orders for TREES, EVERGREENS, SHRUBS, STOCKS, &c. entrusted to his care. His trees, &c. are very fine this year, and his collection very complete. Orders should be sent at once so as to secure the different kinds. The best care will be given to all orders as usual. The Angers Quince Stocks have not succeeded well this year and are scarce and high. Orders should, as usual, be addressed to our agent in New-York, Mr. EDOUARD BOSSANGE, who will give all the information desired, and mail in application free of charges, a detailed copy of my catalogue with prices in dollars and cents.
Nov. 9—w1t—m2t.

CHOICE POULTRY.

THE subscriber offers for sale this fall, a large stock of Poultry, comprising the most known and choice varieties of domestic and imported Fowls, Geese, Turkeys, Ducks, &c. The entire stock was bred by the subscriber from his own importations and selections, upon his own yard and under his own supervision. The public may have full confidence in their genuineness.

Fowls will be delivered in Albany or New-York free of charge.

The subscriber also has a few pure-bred SUFFOLK PIGS for sale. W. H. SOUTHWICK.
Nov. 9—w4tm1t New Baltimore, N. Y.

Ten New-Oxfordshire Sheep for Sale.

TWO oldish—three two years old—one one year old—one six months ewe—one yearling, and two six month's bucks. These sheep are fine specimens of the breed, and my only reason for disposing of them is, that I am about to change the entire stock of my farm. F. LYMAN.
Nov. 2—w1tm1t* Goshen, Litchfield Co., Conn.

EXCELSIOR HORSE POWER
and Threshing Machines.

THIS Portable Lever Four Horse Power is an improvement on Warren's Patent, (which we own,) and by an experience of more than three years, it proves to be the best and cheapest yet known. None have ever failed to give entire satisfaction in all respects. It is simple in construction, and easily understood by any operator. It may be used with one to four horses. We therefore offer it to the public as a most desirable machine for various purposes.

The Thresher is a superior Spike Machine suited for the Power. With these machines 200 bushels or more of dry Wheat are threshed in a day.

Weight of Power about 550 lbs.—Weight of Main Driving Wheel 300 lbs.—or altogether about 900 lbs. Weight of Thresher 200 lbs.

Price of Power and Pully Box, &c., $85.

Cost of Patent Riveted Stretch Leatheed Band, 3¼ inch wide, 40 feet long, $7.50.

Price of Threshers, No I and 2, $40 and $45.

Orders will be duly attended to.

☞ Terms cash on delivery in this city.

PLANT BROTHERS.
Gen'l Com. Merch'ts,
Oct. 26—w1tm2t. 75 Pine street, New York.

Thomas Gould,

BREEDER OF DEVON CATTLE, Suffolk Swine, Madagascar or Lop-Eared Rabbits. and choice and fancy Poultry, Aurora, Cayuga county, N. Y. Mar. 23—w&mtf

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by
Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Life Illustrated. A new First-class Weekly Newspaper, devoted to News, Literature, Science, and the Arts; to Entertainment, Improvement, and Progress. Designed to encourage a spirit of hope, manliness, self-reliance, and activity among the people; to point out the means of profitable economy; and to discuss and illustrate the leading ideas of the day; to record all signs of progress; and to advocate political and industrial rights for all classes.

It contains Essays—Historical, Biographical, and Descriptive. Sketches of Travel and Adventure, Poetry, Painting, Music, Sculpture, etc.; articles on Science, Agriculture, Horticulture, Education, The Markets, General News, and every topic which is of importance or interest, all combining to render it one of the Best Family Newspapers in the World. Published Weekly, at Two Dollars a year in advance. BY FOWLERS & WELLS.
308 Broadway N.Y.

The Water Cure Journal and Herald of Reforms. Devoted to Hydropathy, its Philosophy and Practice; to Physiology and Anatomy, with illustrative engravings; to Dietetics, Exercise, Clothing, Occupations Amusements, and those Laws which govern Life and Health. Published in convenient form for binding, at One Dollar a Year.

The Water-Cure Journal holds a high rank in the science of health; always ready, straight forward, and plain-spoken, it unfolds the laws of our physical nature, without any pretensions to the technicalities of science, but in a form as attractive and refreshing as the sparkling element of which it treats. We know of no American periodical which presents a greater abundance of valuable information on all subjects relating to human progress and welfare.—[*New York Tribune.*

This is, unquestionably, the most popular Health Journal in the world.—[*N. Y. Evening Post.*

The American Phrenological Journal. A Repository of Science, Literature, and General Intelligence; devoted to Phrenology, Education, Mechanism, Architecture, and to all those Progressive Measures which are calculated to Reform, Elevate, and Improve Mankind. Illustrated with numerous portraits and other engravings. A beautiful Quarto, suitable for binding. At One Dollar a Year.

A Journal containing such a mass of interesting matter, devoted to the highest happiness and interests of man, written in the clear and lively style of its practiced editors, and afforded at the "ridiculously low price" of one dollar a year, must succeed in running up its present large circulation to a much higher figure.—*New-York Tribune.*

Subscriptions should be addressed to the Publishers,
FOWLERS AND WELLS,
Nov. 2—w2tm1t 308 Broadway, New-York.

BLACK SPANISH FOWLS.

I AM now able to furnish a few pairs of the Black Spanish, bred from my importation of last spring, from the prize birds of Thos. H. Fox, Esq., of London. For the reputation of his stock, it is only necessary to say that he took the first prizes at the great Metropolitan Show at London last January, as well as fifteen other first prizes in different exhibitions of poultry in Great Britain during the last year.

The Speckled Dorkings.

I not only succeeded in selecting the best Black Spanish but all other popular breeds of fowls in Europe, of which the Dorkings stand at the head.

Of W. Fisher Hobbs of Boxted Lodge, I purchased a pair of his Prize Dorkings, which are very large and beautiful. For the reputation of his stock it is only necessary to say, that Mr. Hobbs took the two first prizes for best Dorkings at the great Metropolitan Show. In the purchase of these and other birds, I availed myself of the advice of Joseph Bailey, Esq., of London, whose opinion is considered equal, if not superior, to any poulterer in Europe. Queen Victoria purchased a pair from each brood of the above breeds of mine, at the same exhibition. For the Spanish Cock I paid $75, and the pair of Dorkings $130. I paid the Queen 27 guineas for nine birds; among the lot were two beautiful Dorkings.

SOL. W. JEWETT.
Nov. 2—w1tm1t* Middlebury, Vt

POULTRY FOR SALE.

THE subscriber who has had several years careful experience in breeding fowls, has a few choice pairs to sell, at reasonable prices, of the following varieties, viz: Grey, Black, Buff and White, Shanghai—Silver and Golden Poland, Black Spanish, Bolton Grey, or Silver Hamburg, Santa Anna Hen Feather Game, Java and African Bantams, and Superior African Geese. Also choice Black and Tan Terrier Dogs. E. E. PLATT.
Nov. 9, 1854—w&mtf. Albany.

Choice Poultry for Sale.

BRAHMA Pootra or Chittagongs—Royal Cochin Chinas—White, Black, Buff and Brown Shanghaes—Black Spanish and Gold and Silver Polands, all warranted pure blood, and of the best importations in the country, or from specimens which took the first and second premiums at many of the recent exhibitions.

Fowls to be sent a distance, will be carefully cooped in good health and good condition. All orders post-paid.

Reference, C. W. Godard, Esq., B. B. Kirtland, Esq., Albany. GEORGE ANDERSON,
56 Schuyler st. Albany, N. Y.
Sept. 1—w&m3m.

Albany Agricultural Works,

Warehouse and Seed Store, 369 *and* 371 *Broadway, Albany.*

THE subscriber having purchased the stock in trade of the above works, is now prepared to furnish to order a full assortment of Farm Implements and Machines adapted to all sections of the country, both north and south, among which may be found—

"*Emery's Patent Changeable Railroad Horse Powers.*"
Overshot Threshing Machines with Separators.
Mowing and Reaping Machines.
Grist-mills, Corn-shellers and Clover-hullers.
Circular and Cross-cut Saw-mills, adapted to the horse power, for cutting fire wood and fence stuff, with a full and complete assortment of FIELD AND GARDEN SEEDS and FERTILIZERS. For further particulars, full Catalogue will be sent on application by mail.

RICH'D H. PEASE,
March 30—w&mtf Successor to Emery & Co

Fertilizers.

BEST Peruvian Guano—
Super-Phosphate of Lime, "DeBurg's No. 1"—
Poudrette, of the best quality—
Ground Plaster, suitable for agricultural purposes—
Ground Bone, Bone Dust, and Burnt Bone.

Also, Grass Seeds of reliable quality, at the lowest market price. GEO. DAVENPORT, 5 Commercial,
Feb. 9, 1854—w&mtf cor. of Chatham st., Boston.

GUANO NOTICE.

AS there is a substance now selling by some dealers in this city and Brooklyn, for the No. 1 Peruvian Guano, we caution the agricultural public who may purchase Peruvian Guano this season, to observe that every bag of the genuine article will have the following brand:

NO. 1,
PERUVIAN GUANO,
IMPORTED BY
F. BARREDA BROTHERS.

The price is now established for this season, at $50 per tun of 2,000 lbs. When taken in lots of five tuns and upwards, a discount will be made. LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25, Cliff-Street
Aug. 17—w6tm2t New-York.

Super-Phosphate of Lime.

THIS celebrated fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian guano, in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *phosphate*, which is often the case. All crops are benefited by its application. It is composed of ground bones, decomposed by sulphuric acid, to which is added a due proportion of Peruvian guano, sulphate of ammonia, &c.

For sale, with *full* directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

GEO. DAVENPORT, Ag't for manufacturer,
5 Commercial, cor. of Chatham st., Boston.
Feb. 16, 1854—w&mtf

PROSPECTUS FOR 1855.

THE SATURDAY EVENING POST.

ESTABLISHED AUGUST 4, 1821.

Weekly Edition between 80,000 and 90,000.

THE long period of over THIRTY-THREE YEARS, during which the SATURDAY EVENING POST has been established' and its present immense circulation, are guarantees to all who may subscribe to it that they will receive a full return for their money. Our arrangements so far for the coming year, are such as we trust will be thought worthy of the high reputation of the Post. POSITIVE ARRANGEMENTS already have been made for contributions from the gifted pens of

MRS. SOUTHWORTH, GRACE GREENWOOD, MRS. DENISON, MARY IRVING,
MRS. CARLEN, FANNY FERN,

And a NEW CONTRIBUTOR, (whose name by request is withheld.)

In the first paper of January next we design commencing the following Novelet:

SIX WEEKS OF COURTSHIP.

By MRS. EMILIE F. CARLEN, Author of "One Year of Wedlock," &c., &c.

We purpose following this with an Original Nevelet—designed to illustrate, incidentally, the great EVILS OF INTEMPERANCE—entitled

THE FALLS OF THE WYALUSING.

By a New and Distinguished Contributor.

We also have made arrangements for TWO STORIES, to be entitled

THE ONEIDA SISTERS,

AND

THE NABOB'S WILL.

By GRACE GREENWOOD, Author of "Greenwood Leaves," "Haps and Mishaps," &c.

Also, the following additional contributions:—

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MARK, THE SEXTON.

A Novelet, by MRS. DENISON, Author of "The Step-Mother," "Home Pictures," &c.

NANCY SELWYN, or the Cloud with a Silver Lining.

A Novelet by MARY IRVING.

And last, but by no means least—from the fascinating and powerful pen of the Post's own exclusive contributor—

VIVIA,

A STORY OF LIFE'S MYSTERY,

By MRS. EMMA D. E. N. SOUTHWORTH, Author of "Miriam," "The Lost Heiress," &c. &c. &c.

In addition to the above proud array of contributions, we shall endeavor to keep up our usual variety of ORIGINAL SKETCHES AND LETTERS, PICTURES OF LIFE in our own and Foreign Lands, CHOICE SELECTIONS from all sources, AGRICULTURAL ARTICLES, GENERAL NEWS, HUMOROUS ANECDOTES, View of the PRODUCE AND STOCK MARKETS, BANK NOTE LIST, EDITORIALS, &c. &c.,—our object being to give a Complete Record, as far as our limits will admit, of the Great World.

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13	" (And one to the getter up of the Club.)	15.00	"
20	" (And one to the getter up of the Club,)	20.00	"

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No. 66 SOUTH THIRD STREET, PHILADELPHIA.

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☞ TO EDITORS—Editors who give the above one insertion, or condense the material portions of it, (the notices of new contributions and our terms,) for their *editorial* columns, shall be *entitled* to an exchange, by sending us a marked copy of the paper containing the advertisement or notice.

☞ Complimentary notices omitted for want of room. Nov. 23—w1tm1t.

Suffolk Pigs,

OF pure blood, for sale by B. V. FRENCH,
Feb 1—m1y Braintree, Mass.

The Iowa Farmer,

PUBLISHED monthly, in Burlington, Iowa. Price One Dollar a year. Devoted to the advancement of West

Contents of this Number.

THE FARM.

A Word More to our Subscribers, ... 361
Calamities Changed to Blessings, ... 363
Does Manuring Always Pay? 364
The Great Hay Crop in Scotland, ... 365
Damp Houses, by G. E. H., ... 366
Cattle Show at Northampton, by E. N. N., ... 367
The Peculiar Property of Wheat, ... 368
Stowell Evergreen Corn—Fence Posts, ... 368
On the Practical Value of the Analyses of Plntas, by S. W. Johnson, ... 369
Frauds in Manures, ... 371
To Destroy Liveforever, by S. D. Goodwin, ... 371
Farming in California, ... 372
Seedling Potato, by Dr. H. Wendell, ... 376
Carrots and Deep Plowing, by C. Smith, ... 376
Answers to Inquiries, ... 377
Mediterranean Wheat, Selection of Seed, &c., by C. W., 377
Notes for the Month, ... 379

THE GRAZIER.

Sheep and Pigs for the South, ... 368
A Suffolk Pig, by J. M. Sherwood, ... 372
The Health and Comfort of Horses Sacrificed, ... 372
Yellow Legged Dorkings, ... 376

THE HORTICULTURIST.

Cross' Patent Grape Frame, ... 373
The New Curculio Remedy, ... 373
Foliage Destroyed by Grasshoppers, ... 374
Garden Walks, ... 374
Facts from *The Horticulturist*, ... 374
Massachusetts Hort. Society, ... 376

THE HOUSEWIFE.

How to Fry Apples, by Non Epicurus, ... 375
How to Make Corn Husk Beds, ... 375
Trying out Lard, ... 375
Economy in Washing, ... 375
Cure for Bone Felons, ... 375

ILLUSTRATIONS.

A Suffolk Pig, ... 372
Cross' Patent Grape Frame, ... 373

PROSPECTUS FOR 1855.

THE LITTLE PILGRIM:

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GRACE GREENWOOD & LEANDER K. LIPPINCOTT
Illustrations by DEVEREUX and others.

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Nov. 23—w4tm1t. 66 *South Third St*, *Philadelphia.*

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THE most useful Newspaper which the hop growers of this country can take, is the FREEMAN'S JOURNAL, published at Cooperstown, Otsego County—a county which produces more hops than any other *four* in the State. The Journal pays particular attention to the growth and condition of the crop in this country and Europe and the foreign and domestic markets. It is also an excellent family Newspaper—giving more reading matter than any other country paper in the Union. Its circulation among hop growers is already very extensive. TERMS—$1,50 a year in advance or $1 for 8 months. Money can be remitted by mail, at the risk of the editor. Address

S. M. SHAW,
Nov.16—wt3tm1t. Cooperstown, N.Y.

THE ILLUSTRATED

Annual Register of Rural Affairs
AND
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IX. MISCELLANEOUS MATTERS—Embracing a great variety of valuable Hints and Suggestions for the Farmer, Gardener and Housekeeper.

Recapitulation of Illustrations.

Country Dwellings—Engravings,	11
Improving and Planting Grounds,	21
Culture of Fruit,	40
Farm Buildings,	11
Farm Implements,	19
Improvement in Animals,	17
Laying out Farms,	3
Total Engravings,	122

It will be seen from this abstract of the contents of the *Illustrated Annual Register*, that it has been prepared with special regard to the wants of our rural population, and we hazard little in saying that it will afford more valuable information on several of the subjects of which it treats, than has ever before been presented at so small a cost. The chapters on Country Dwellings—Improving and Planting Grounds, and the Culture of Fruit, have been prepared by Mr. J. J. THOMAS, with his usual taste and ability, expressly for this work, and are each well worth more than its cost.

This number of the Annual Register is intended as the first of a series, to be issued annually at or near the close of each year. Filled as they will be mainly with matter of permanent interest, they will form a series which no man, having a farm or garden, or hopes of future retirement to rural scenes, should be without.

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